Work Plan

Management Plan Review (MPR)
Stellwagen Bank National Marine Sanctuary

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June 19, 2003

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Draft Work Plan
June 16, 2003

Introduction

National Marine Sanctuaries are established in areas of the marine environment that have been selected for their conservation, recreational, ecological, historical, research, educational or aesthetic values. Regulations implementing the National Marine Sanctuary Program (15 CFR Part 922) require the preparation of management plans for all sanctuaries. These management plans identify long-term, comprehensive strategies for the administration and operation of marine sanctuaries following designation. Strategies focus on the site's goals and objectives, management responsibilities, research and interpretation/ education programs, and plan implementation policies. The management plan is also a public document, providing information to government agencies, research and education institutions, other organizations, and the interested public on how, why, and by whom the Sanctuary will be protected and managed.

The management plan establishes an administrative framework for the Sanctuary that identifies the cooperation and coordination necessary to ensure effective management. The National Marine Sanctuary Program of the National Oceanic and Atmospheric Administration (NOAA), however, retains overall responsibility for site management.

Management Plan Review

Management plans are sanctuary-specific planning and management documents that describe the objectives, policies, and activities for a sanctuary. They generally outline regulatory goals, describe boundaries, identify staffing and budget needs, set priorities and performance measures to assure program areas such as education and research are addressing issues of greatest concern for the health of the sanctuary. Management plans also guide the development of future management activities.

The National Marine Sanctuary Program (NMSP) is required by law to periodically review sanctuary management plans to ensure the sanctuary sites continue to best conserve, protect, and enhance their nationally significant living and cultural resources. Recent scientific discoveries,

advancements in managing marine resources, and new resource management issues may not be adequately addressed in the existing plan.

Stellwagen Bank National Marine Sanctuary is currently undergoing a management plan review. Using a community-based process that will continue to provide opportunities for public input, the NMSP will determine whether current issues and threats to the resources are the same as when the initial management plan was developed, and whether the management plan put in place at that time is protecting sanctuary resources. The review will also evaluate management strategies and regulations.

Purpose of Work Plan

The Stellwagen Bank National Marine Sanctuary is in the process of developing a draft Sanctuary Management Plan that will consider how best to manage the site to protect and conserve resources. A Sanctuary Management Plan is comprised of issue-specific action plans for activities and programs that will be implemented during the next five years. The SBNMS will develop these action plans to address priority issues with the help of the public. For some issues, working groups, comprised of staff, Sanctuary Advisory Council (SAC) members and subject experts, will be established to further characterize the issue and develop strategies to address them. The recommendations of these working groups will be presented to the SAC. Other issues may be addressed by an internal team, comprised of NMSP staff, who will develop recommendations for the SAC. SAC members and other subject experts will be invited to participate in the working groups, after the work plan is finalized. All working group meetings and SAC meetings are open to the public, and the locations and times of these meeting will be posted on the SBNMS website (http://stellwagen.nos.noaa.gov).

Role of NEPA in MPR Development

As with all federal agencies, the SBNMS is obligated to comply with the National Environmental Protection Act (NEPA) enacted by Congress in 1969. Essentially NEPA has two objectives. The first is to prevent or eliminate damage to the environment by federal agency actions. The second is to ensure that agency decision makers take environmental factors into account when they assess their activities. NEPA essentially makes all agencies of the Federal Government participants in environmental protections. The NEPA process begins with agency planning and requires that environmental considerations be integrated into that planning. However, NEPA does not interfere with nor does it dictate the outcome of an agencies decision.

One of the important components of NEPA is the opportunity for an agency to engage stakeholders and the public when preparing to make decisions. The NMSP relies on Sanctuary Advisory Councils to advise sanctuary managers about public and stakeholder views on issues before sanctuary management. As the management plan review begins to consider potential actions to resolve or mitigate issues of concern identified through the public scoping process, the working groups will assist the SAC by further refining management plan goals and objectives. The working groups, made up of stakeholders and technical experts, will also contribute to the analysis of the identified issues and propose action plans to the SAC. In these action plans, the working groups may identify specific actions, tools or techniques necessary to accomplish each objective. The working group may also prepare strategies for specific projects. The analysis performed on these issues, and the recommendations made by the working groups, will assist SBNMS and NMSP in developing alternatives that will reflect different sets of strategies and actions for management as required by NEPA. The working group products will also inform managers in the identification of the alternative that best achieves the purpose, goals, and vision of NMSP and SBNMS.

While the legal obligation for NEPA compliance rests with the decision-making agency, NEPA significantly expand public participation in federal decision-making and provide procedures for consideration and disclosure of effects of Federal actions on the environment. This shifts the historic method of policy making from inside an agency to the public eye. While the agency holds the responsibility for its final decision, NEPA provides an opportunity for an improved understanding in the public of why an agency action occurs. This shift also adds a layer of visibility and a shift in style for agency decision-making. While agencies have historically operated in a fairly insular fashion, the public increasingly identifies redundancies and overlaps that create complicated multi-agency regulatory regimes. There is obvious benefit for an agency with limited agency resources in avoiding inefficient redundancies and strong partnerships afford opportunities for a focused effort on shared problem solving. The participation of the SBNMS SAC and the SBNMS SAC working groups provides the SBNMS superintendent with invaluable input and insight into stakeholder interests.

Identification and Prioritization of Issues

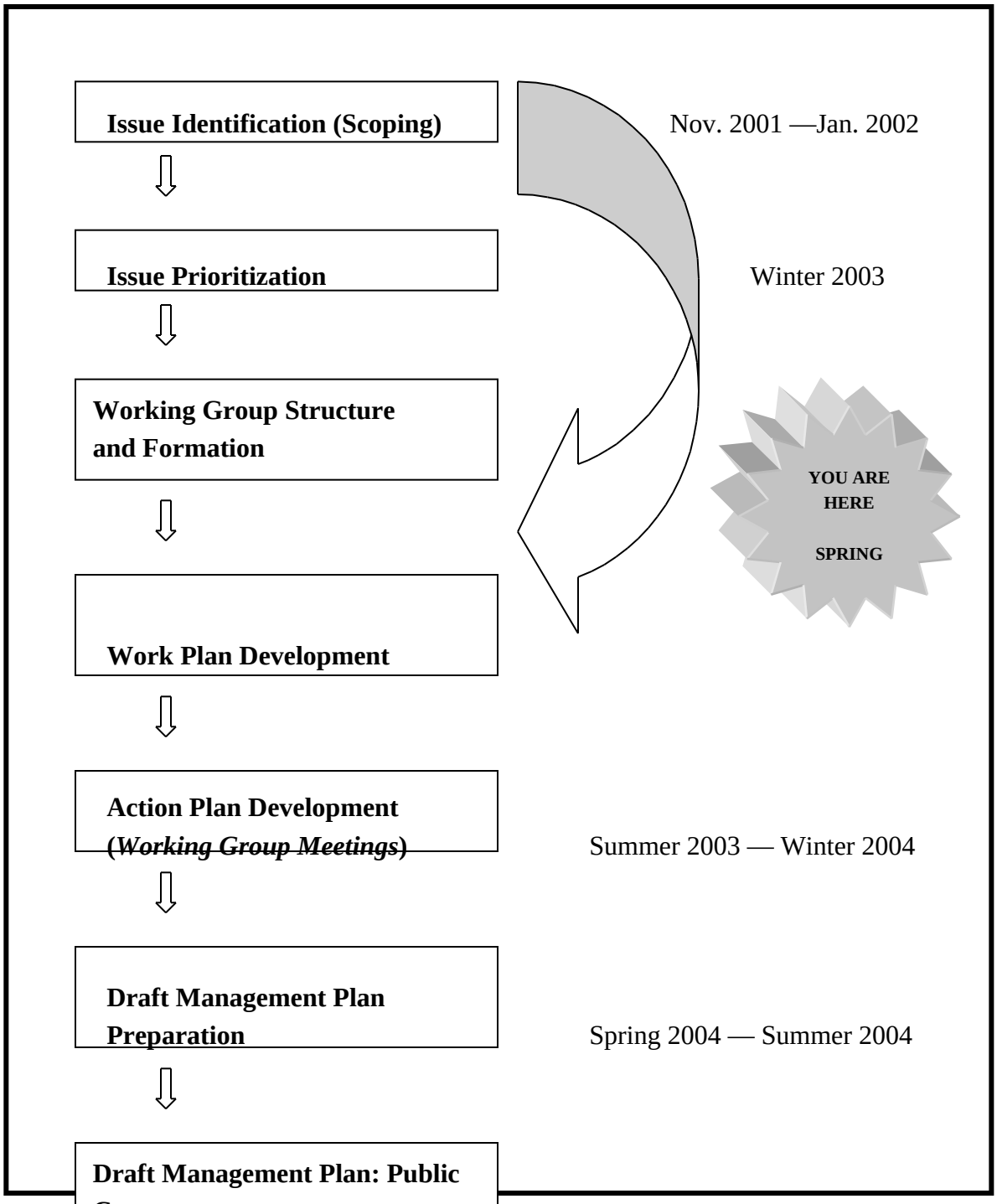
The NMSP selected the issues to be addressed in the management plan review following an extensive public process of scoping and issue prioritization which included the participation of the Sanctuary Advisory Council. The SBNMS MPR process began in January 1999 with an initial 5 public scoping meetings. SBNMS reopened the public comment period during July-October 2002, held an additional 9 scoping meetings between September and October 2002, and received approximately 20,000 comments. At the February 11, 2002 Advisory Council meeting,

SAC members provided feedback and recommendations on the resource issues to be addressed. Based on input from the SAC, the summary document, *Issues to be Addressed in the Management Plan Review is* presented for viewing on the SBNMS website (http://stellwagen.nos.noaa.gov).

Next Steps

This work plan provides a guide on how the management plan will be developed over the upcoming year. The next step is to establish and convene the SAC "working groups" and staff "internal teams." These working groups and teams will be provided direction, a description of the issues and what is expected in terms of a product or recommendation from the group. The groups will meet over the course of several months and present their recommendations in the form of action plans to the SAC for review and comment. SBNMS staff will then assemble the specific action plans into a draft management plan; develop the supporting environmental and socioeconomic documents; and release the draft management plan(s) for public review.

Management Plan Development Steps **Dates**



Fall 2005

Working Group Name: Site Characterization

Issues Addressed:

1.B More detailed site characterization and assessment of resource status
2.A Need for more information on habits and habitat use of SBNMS whales and other marine mammals.

Issue Description: A comprehensive "site characterization" for the SBNMS is critical for successful Sanctuary management, including each of its programs—research and monitoring, education and outreach, and enforcement. A characterization may take one of three forms depending on such factors as the available financial resources, staff expertise, and availability of regional research partners:

1) Inventory: At its most basic, a site characterization will provide an inventory of the biological, physical and economic resources, as well as human activities, that are found in the Sanctuary. This is essentially a list of what is there (submerged cultural resources, which are the purview of a separate work plan, are not covered here). This inventory may or may not contain information on the abundance and/or spatial and temporal distribution of those resources or activities. For instance, a characterization at this level might identify the total number of fish species that occur within the SBNMS.

2) Spatio-temporal Distribution and Abundance: A more extensive site characterization will involve a more complete account of where and when a given resource or activity is within the Sanctuary, and how abundant that resource or activity is in the areas and or times in which it occurs. For instance, this level of the site characterization would also describe where and when these fishes are in the Sanctuary and how abundant they are at those locations and times.

3) Integrated Assessment: A third, and more complete site characterization, would involve all of the above, as well as some treatment of the relationships between a given resource or activity and its surroundings. In this case, the characterization would also describe the underlying ecological relationships between the fish and the biological and physical resources that co-occur with it in the Sanctuary.

Background and Regional Context:

The public comment scoping process conducted by SBNMS in 1998, and again in 2002, identified several concerns relative to the site characterization and the assessment of resource status at SBNMS. Concerns in this regard included the need for a comprehensive research plan, the implementation of a research closure in the Sanctuary, the lack of a comprehensive monitoring program to determine baselines and/or to recognize changes in the SBNMS ecosystem, and a comprehensive socio-economic analysis of the value of SBNMS resources.

There is a great deal of existing scientific and economic data on the types of biological, physical and economic resources that occur within the Gulf of Maine and on Georges Bank, as well as on the human activities that occur there. These data are of varying quality, are available at a range of spatial and temporal scales, and cover a multitude of taxa (such as fishes, marine mammals, invertebrates and seabirds) and activities (such as fishing, whale watching, and waste disposal). Many of these data either encompass some or all of the Sanctuary, or cover other areas but include resources or activities that also occur in the Sanctuary. However, there are very few datasets that were explicitly collected at the scale of the Sanctuary, or that were collected to explicitly address questions relative to the Sanctuary.

An initial site characterization, entitled "The Resources and Uses of Stellwagen Bank," was prepared at a regional conference in 1990. The information provided in this original characterization is largely of the inventory type described above. A Sanctuary Research Plan was developed during public meetings in 1994. The plan was subsequently revised in 1997. The Plan identified specific topics of import to the Sanctuary and enumerated research projects to address those topics. While new data have become available since the original site characterization and since the revision of the research plan, the specific elements of the plan are still largely applicable to the Sanctuary in the present. In 1995, a book entitled "Stellwagen Bank: A Guide to the Whales, Seabirds, and Marine Life of the Stellwagen Bank National Marine Sanctuary" was published that provided an overview of the diverse taxa that occur in the Sanctuary and ecological relationships among them.

Existing Regulations: *Not Applicable*

Who are the Players?

Players, in this context, are characterized as agencies or institutions that are actively engaged in research and data collection, or actively support particular databases. The list is not intended to be exhaustive, and is expected to grow as the process continues.

Regional Universities

University of Connecticut
Boston University
Brown University
University of Maine
University of Massachusetts
Massachusetts Institute of Technology
Harvard University
University of New Hampshire
University of Rhode Island

Government Agencies

US Geological Survey
National Marine Fisheries Service
National Centers for Coastal Ocean Science Massachusetts Division of Marine Fisheries
Massachusetts Water Resources Authority

Conservation or Research Organizations and NGOs

Woods Hole Oceanographic Institute
Marine Biological Laboratory
Center For Coastal Studies
Whale Center of New England
International Fund for Animal Welfare
International Wildlife Coalition
New England Aquarium
Conservation Law Foundation
Sea Education Association
Manomet Observatory

Private Contractors

TPMC/Perot Systems
Battelle

Working Group Participants:

SBNMS Staff Team Leader: James Lindholm
SBNMS Staff (3): Dave Wiley

Ben Haskell
Michael Thompson (contractor for TPMC)

SAC Member Chair (1)
Academic Seats (2)
NMFS (1)
NCCOS (1)
Mass CZM (1)
USGS (1)
Marine Mammal (1)

Technical Advisors:

Technical advisors will provide supporting data to the Sanctuary, and may provide presentations on particular topics directly to the working group.

Jon Witman (Brown University)
Les Watling (UMaine)
Rodney Roundtree (UMass Dartmouth)
Page Valentine (USGS)
Alan Robinson (Harvard)
Carlton Hunt (Battelle)
Rose Cook (formerly of UCONN)
Peter Scheifele (NURC-UCONN)
Rich Taylor (scalloper)
Frank Mirarchi (dragger)
Molly Lutcavage (UNH)

Anticipated Outcomes and Products:

1) Comprehensive Site Characterization: this is a long-term, on-going product that will become available in several iterations. The first iteration will involve the assimilation of all existing data into a GIS for use in the SBNMS Management Plan Working Groups beginning in September 2003. Following this first assimilation, additional data will be added as they become available. A second iteration will become available in FY2005 with the publication of the Comprehensive Biogeographic Assessment for SBNMS. The site characterization document will be used in the preparation of the Management Plan.

2) List of Data Gaps: this will be a list of critical information needs for which no data, or limited data, currently exist.

3) Revised Research Plan to Fill Identified Gaps in Data: this will be a revision of the 1997 Plan to reflect what has been done and any new issues that have arisen through the Management Plan Review Process.

Proposed Timeline:

A minimum of 2 meetings:

- First meeting in late June or early July 2003: The goal of this first meeting will be to list all data that we have collected up to that point, clarify what is in GIS and what will soon be GIS, show examples of various datasets, and discuss with attendees whether additional datasets are available.
- Second meeting in late August or early September 2003: at this meeting we will discuss any data assimilated since the first meeting.
- Additional all-day meetings will occur as necessary into Fall 2003. These meetings may be scheduled to deal with specific topics, or be divided into sub-groups rather than the entire Working Group.

Related Public Scoping Comments:

1.B.1 Comprehensive Research Plan:

Concerns:

1. Consideration should be given to protecting large animals such as basking sharks, mola-molas and others in addition to marine mammals, since these megafauna suffer from some of the same impacts from human activities and may merit protection.
2. Desired actions for the Sanctuary may likely be accomplished through these partnerships with relatively little expenditure of SBNMS resources but could still meet your needs.
3. Research should be an integral part of plan in particular marine mammal research coordinated with other GoM entities
4. There needs to be unbiased research efforts on biodiversity and community structure and human impacts on these (for example bycatch of seabirds, dolphins, fish, turtles)
5. Research should not stand alone; It should be used to affect mgmnt decision making
6. Stellwagen Bank's potential to be a research reserve has been greatly under appreciated. Considering its accessibility to numerous research institutions in the Northeast, Stellwagen Bank is an ideal location for scientific studies.
7. It is not possible to truly understand the impacts of human activities in the sanctuary without a site designated as a scientific control. Stellwagen Bank or areas within could serve as this control site and the data collected there could then be used to better understand the species population dynamics and overall bio-complexity of marine ecosystems in the northeastern U.S.
8. Involving the fishing fleet in the research process can be a very effective way of building more productive relationships, as well as obtaining critical scientific data. (see: Case study: Australian Effects of Line Fishing (ELF) Project run by the Cooperative Research Center for the Great Barrier Reef (GBR) World Heritage Area.
9. Working with the fishing fleet can not only drastically increase the volume of data generated, but it can also open a veritable treasure trove of historical data (e.g. anecdotal) on locations and time periods for which scientific information is lacking. (note 2001 Marine Conservation Biology Institute research grant scheme aimed at tapping into fishers' knowledge and other types of historical information.)
10. New England's marine environment should be managed using the most sophisticated tools available, similar to efforts involving other natural wonders.
11. As the representative of the New England marine environment in the federal sanctuary network, SBNMS is a logical place from which to begin application of state of the art modeling approaches.

Actions / strategies:

1. Create a science advisory panel to assure regular review of priorities and accountability.
2. Assure respectful inclusiveness of input from a full range of partnerships
3. Include community based; grass roots; institutional; academic research and groups
4. Prepare a visible annual report on progress in meeting goals
5. Initiate peer review of projects to ensure value of the proposal to a larger plan.
6. Invest in site characterization work and research to develop a true State of the Sanctuary report:
7. Document what data exists; find ways to communicate the information such as MA EOEA bio mapping project.
8. Develop a rigorous site characterization and identify existing data, information gaps, modeling and monitoring needs; make this information readily available
9. Partner with others for whale protection as an example of how to handle management for animals that use a huge range of habitat such as the great whales. (for example create partnership with managers of breeding grounds)
10. Use the expertise of global and regional research institutions to help inform any gaps in local information.
11. Compile a case history of the ecosystem including historic information of how human impacts and climate effects have altered the ecosystem through time.
12. SBNMS should perform a comprehensive assessment of marine ecological function within Sanctuary and in areas proximate to or with close ecological relationship to SBNMSAssessment should consider : Trophic structure; Species relationships; Species annual distribution patterns; Species age class structures; Habitat characteristics; Susceptibility to disturbance; Vulnerability of benthic communities

13. Develop inventory of habitat types including an inventory of characteristic species.
14. Develop some measure of ecosystem health based on community composition. This will also help to evaluate potential large scale impacts such as global warming and invasive species.
15. Coordinate sanctuary research with other research; Leverage other academic and scientific research efforts
16. Whale populations are found spatially and temporal, there should be seasonal increases in research and monitoring as well a speed restrictions
17. Add invasive species to research that needs to be performed
18. Sanctuary reports don't include enough data
19. SBNMS should take a role in researching predator prey relationships, especially the impact of mid water trawling on whale / tuna migration patterns
20. Enter into a comprehensive program working with NEFMC, NMFS and full range of fisheries interestsCome up with a synopsis of ecological functions that take place within SBNMS and build comprehensive a marine zoning plan
21. Research and monitor outfall pipe to determine any impacts on food web
22. Create database of marine invertebrates within SBNMS23. Communicating about research process and results on an annual basis updates; progress reports; financial spending, etc – like grant review process
23. Ecosystem is constantly changing; Need to understand long term trends and historical trends in fishery
24. SBNMS is a great resources for studying; Develop internship / research program
25. SBNMS research should look at environmental history of the area to use in informing mngmnt
26. Identify and protect rare endangered species that live within or move through SBNMS, including plant life
27. Profile research and publish as soon as possible; Information takes too long to get to the public and decision makers
28. Make public aware of research that would show the importance of the sanctuary
29. Clarify what is the role and significance of SB in GoM ecosystem.
30. Sanctuary should compile and integrate existing research before conducting new research
31. Create a data base of existing picture; Conduct gap analysis of information; Utilize non scientific people out on the bank; Consider anecdotal advisories
32. More research needed on water quality in SBNMSAssess activities of disposal site near boundary; Sediment quality; Effects on benthic invertebrates and other bottom dwelling creatures
33. Do not close areas for research only
34. Advocate for scientific research reserve areas within SBNMS and WGoM closed areaResearch requires controls for comparisons with fished areas
35. Research reserves should not become a proxy for management measures which would not otherwise be justifiable
36. Where research reserves are contemplated in presently open fishing grounds, consideration should be weighed under procedures consistent with those utilized by RFMC's to ensure fair treatment for all parties.
37. Coordinate any expansion of closed areas with SBNMS with changes by NEFMC / WGoMCAWeigh a more balanced set of criteria for a reconfigured WGoM / SBNMS protected areaOriginal WGoM closure gave minimal consideration to habitat protection; disproportionate impacts on fishing fleet sectors; specific fishing ports
38. A scientific advisory council should be established to compile existing historical data, perform work on site characterization, oversee projects within the SBNMSThe scientific advisory council should consider research on the migratory range of animals living in or traversing through the sanctuary, and build international partnerships to strengthen management regimes.A research and monitoring committee, consisting of sanctuary advisory council members, additional regional scientists and resource managers, should meet annually to establish research priorities for the upcoming year.
39. To facilitate objectivity and acceptance of results, the scientific advisory council should be comprised of a wide range of specialists and stakeholders and avoid the selection of "the usual candidates"
40. SBNMS is surrounded by world class marine research institutions from Rhode Island to Maine. The Sanctuary should be a living laboratory for these institutions.
41. The revised management plan should include plans for detailed mapping of every square inch of the Sanctuary including: seafloor sediment, topography, a census of benthic and pelagic biological communities
42. Consider the model of the NOPP-sponsored Fleetlink technology that has converted commercial fishing vessels into meteorological/oceanographic monitoring stations.

43. Efforts need to include the coordination and management of data being collected by other entities investigating the ecological integrity and cultural resources of the sanctuary.
44. SBNMS should participate and potentially contribute as a stakeholder in research being conducted in the geographic regions adjacent to (e.g., Massachusetts estuaries and watersheds) and encompassing the sanctuary (e.g., the Gulf of Maine).
45. Research that will strengthen management-driven objectives and anticipated legislative actions should be prioritized.
46. needs and, if feasible, appropriate funding sources should be communicated to marine research institutions throughout the Northeast.
47. Data should be used to strengthen the sanctuary's identity and value as a Marine Protected Area and to identify the most suitable areas for No-Take Zones.
48. Other "charismatic mega and micro-fauna" such as basking sharks, Mola molas, schooling fish, phosphorescent plankton should be highlighted in order to demonstrate the variety and complexity of the ecosystem that exists at Stellwagen Bank.
49. If Sanctuary management is going to succeed, a thorough analysis of the variance of presence/absence in relation to the threats to individual species must be understood prior to any regulatory proposal.
50. Note 5 yr herring spawning study through NMFS in 74-76 for planning process (see Chase letter for cites)
51. Discuss SBNMS in relation to the larger GoM ecosystem to which it belongs
52. Build a model of SBNMS; Modern natural resource management depends heavily on the use mathematical models. This is due to their capacity to integrate the many and complex interacting components of ecological systems, the much greater temporal and spatial scales that can be explored, and the limitations of insights attainable through empirical research alone (see Kritzer original letter for discussion).
53. Potential components and structure of an SBNMS model are illustrated in Figure 2.(see Kritzer original letter)
54. Modeling efforts should eventually extend more widely and link with other areas.
55. A system model of SBNMS and its sub-models of whales and other components of the system should eventually be nested within a larger New England (and southeastern Canada?) regional marine environment model, which can help facilitate interaction among agencies.
56. As a specifically designated marine site SBNMS should be an arena for new management tools and approaches Add invasive species to research that needs to be performed
57. Assure peer review of work being used to make decisions
58. As a specifically designated marine site SBNMS should be an arena for new management tools and approaches
59. Rules proposed should have scientific backing and sound reasoning – not feel good response
60. Development of new regulations should be scientifically driven
61. The NMSP must take an objective, science-based look at the status and trends of SBNMS sanctuary resources to enhance protection of biological resources, with the goal of recommending appropriate actions as part of the management plan review.
62. The Draft Management Plan must be rife with research agendas and strategies to answer important Sanctuary questions and with actions plans related to protection of well-defined, sensitive habitat. Uction
63. Do more cooperative research with fishing industry
64. We suggest the Sanctuary Plan must emphasize regaining trust and demonstrating that Sanctuary staff are very open-minded about how to deal with the issue of impact of fishing gear on the bottom habitat. This can be accomplished by working with fishermen on collaborative research projects designed to identify sensitive bottom habitat and investigate improved fishing gear to reduce or eliminate impact in those areas.
65. Gloucester would welcome an opportunity to increase the visibility of Gloucester's support for Sanctuary research operations
66. Gloucester fishermen should be consulted regarding the nature and importance of different habitat areas within SBNMS as fish habitat, spawning and nursery areas; the nature and different areas within SBNMS as significant fishing grounds including which stocks are fished in which area with which gear; how various types of gear affect the sea floor and which types of gear can be used in different areas

1.B.2 Research Closure:

Concerns:

1. The Sanctuary already contains sufficient closed areas for comparative research purposes.
2. Opportunity exists to set up a controlled experiment in resource management by closing off one third to one half of the Sanctuary to all extractive activities, both commercial and recreational, and leaving the remainder open. Under these circumstances, it would at least become feasible to conduct comparative research on the open and closed areas, and thus to be able to separate human activities from other natural influences on resource distribution and abundance.
3. Without a clear designation of impacted and unimpacted (or at least less impacted) areas, there is positively no management accountability, and the entire exercise of managing human impacts becomes one of meaninglessness and futility.
4. The cost of this research must be considered part of the essential budget for SBNMS, though the work itself may be either conducted by Sanctuary staff or let out via competitive or collaborative proposals by area academic institutions. To judge from NOAA's sudden-death budget process each year, Congress is blissfully unaware of this need. No small part of this may be attributable to the way that powerful interests that run the New England Fishery Management Council jerk NMFS, NMS, and the rest of NOAA around.
5. Sanctuary must have control of the effects of human activity on the seafloor
6. SBNMS should conduct information discussions with people who are interested in other processes than inshore fishers at other sites
7. Articulate interest in east side of SBNMS that overlaps with WGoM closure including: what is sanctuary investigating, where; what period of time; what results areMake this an open process on the grounds that SBNMS is opposing redrawing WGoM closure due to ongoing research
8. Need science to show “no take” reserves are contributing / can contribute to fish stocks
9. Establish “control” sites (i.e. no take areas) to determine human impacts and to maintain pristine areas
10. WGoM should be considered for full closure; Sliver piece should be permanent closure for sake of research
11. If NMFS keeps larger area closed then include portion in SBNMS
12. Reliance on NEFMC authority for this closure and the role of reserves in SBNMS creates problems:The utility of the WGOM closure both for conservation of resources and research is reduced by the fact that other fishing activities are still legally permitted within the area. This area was selected to achieve groundfish management goals, not ecosystem protection or research goals.
13. The WGoM closure nearly expired in 2002 and was renewed only at the last minute during complicated groundfish litigation and related management actions. The Sanctuary cannot accomplish its resource protection and research goals amidst such uncertainty about key management measures implemented within its boundaries.
14. The value in the size of the site is the possibility to test some of the systems management due to the scale of the study area and to test new management methods.

Actions / strategies:

1. Protect seafloor by keeping WGoM closed
2. Continue research into impacts on bottom in trawled and non trawled areas
3. In an effort to research the affects of commercial fishing we propose the permanent closure of specific areas, so that researchers would be able to have a steady control group to be able to study the fish population.
4. Look at overlapping of current fishing closed areas. Use that area as research area
5. SBNMS should duplicate the existing GoM closure within the SBNMS; need scientific control to determine effects of trawls on benthic habitat
6. Must communicate the results of these research efforts to NEFMC
7. Establish no take reserves as control sites for research necessary but…integrate with other gulf wide activities. Careful consideration is necessary with gulf wide interests involved
8. SBNMS should recommend to the council areas that should be set aside as research only areas (could be temporary)
9. The current trawl exclusion zone covers only a corner of the Bank and that with a sandy bottom. While the best plan would exclude all trawl activity, this is politically unlikely. However, included in the no disturbance zones should be a larger block of the sanctuary which includes cobble bottoms. There should be a representative and contiguous set

of bottom habitats protected from disturbance. There has been damage from trawl activity which might be remedied by allowing areas of hard substrate to recolonize.

10. Every effort should be made to permanently protect the sliver of SBNMS currently within the Western Gulf of Maine fishery closure in order to ensure the integrity of ongoing research within that area.

1.B.3 Lack of Comprehensive Monitoring Program to Determine Baselines / Recognize Changes in SBNMS Ecosystem:

Concerns:

1. The State of the Sanctuary report should be revised to reflect environmental trends (both positive and negative) over the past decade.
2. There is currently no framework to guide and use monitoring data. Data is collected but not consistent; no planning of use, just haphazard collection. Data collected needs to be available to the public. This is paid for by the public
3. CLF expects the MPR to include a comprehensive assessment of the health of the resources within the Sanctuary and of the anthropogenic activities that threaten the heath of specific resources or the functioning of the SBNMS ecosystem itself.

Actions / strategies:

1. Develop specific measures of ecosystem health. See William Dennison's Moreton Bay publications http://www.coastal.crc.org.au/ehmp/publications.html
2. Threshold values (quantitative values or qualitative states) for a variety of metrics that serve as proxies for the status of habitats and organisms within the site should be developed such that clear actions are required when threshold values are reached
3. Develop a water quality monitoring plan to assess impacts of MWRA outfall and non pt source pollution (nitrogen inputs)
4. To monitor larger scale changes such as global climate change buoys should be put in SBNMS for monitoring
5. SBNMS must dedicate program staff / funds to monitoring program
6. Need evaluation of state of the sanctuary from10 yrs ago to today to determine if there have been changes in status or resources before suggesting new changes
7. Establish baseline and make that information publicly available.Few people (including SBNMS) know what the status of the sanctuary is
8. SBNMS should monitor predator / prey relationships throughout the sanctuary i.e. sand eels, herring
   understand food web. identify correlations between oceanographic features and predator / prey relationships
9. Investigate why marine mammals have left sanctuary this year. Prepare annual monitoring plan of conditions that can affect marine mammals
10. Must create measurable objectives to show quantitatively measures of success
11. Equip vessels in vicinity of SBNMS with instrumentation to collect data (e.g. water quality) for education; research and monitoring. Vessels should receive money for this service. Commercial fishermen have info re: water temp; salinity; wind, etc but there is no incentive to share
12. A systematic monitoring program needs to be established for the sanctuary that evaluates fundamental resources, such as water column characteristics and seafloor habitat conditions, through space and time – providing the means to establish trends of resource quality (e.g., species populations, community structure, water quality, etc.).
13. The new management plan should include measures to significantly reduce threats.
14. Create system for determining management effectiveness16. CZM recommends that the SBNMS staff continue to provide input into siting and compliance-related monitoring of permitted activities.

1.B.4 Seabird Use of SBNMS:

Concerns:

Actions / strategies:

1. Address lack of knowledge of seabird use of SBNMS
2. Research abundance, trends and distribution3. Perform a demonstration project to assist in GoM wide monitoring of seabirds4. SBNMS, as a specially designated conservation area, should take the initiative to forward our knowledge base regarding seabird use of habitats5. Implement a seabird monitoring program on SBNNMS

1.B.5 Comprehensive Socio-economic Analysis of Value of SBNMS:

1.B.5.a interrelationship with resource management:

Concerns:

1. Recognize vital connection between sustainable economy, world governance, and policies sensitive to global envt
2. West has historically been too good at exploiting forces of nature and natural resources
3. We must learn how to allow natural systems to flourish and fit within natural cycles rather than try to control them
4. Commerce and shipping critical to the economic life of Boston. Any regulations should take this into account
5. If permits or regs established then concerned about impacts to specific / selective users (WW / party boats)
6. Designated shipping lanes should remain in place; No need to establish speed restrictions there
7. Changes to shipping lanes would create more hazardous situation, especially if lanes moved closer to Cape Anne
8. Shipping lanes need to be open – this is the means to bring necessary commodities to Boston
9. Commercial use of public resource must be very tightly managed and user must show no impacts to environment before permitted; NOAA should not be selling of resources entrusted to it
10. Concerned about for profit industries buying access and usage of SBNMS(Fibre optic cables; wind farm; others?)
11. Sanctuary should have a vision of how fishing fits into ecosystem based management
12. How is value of resource (e.g. herring) measured? Is there any indicator for value to whales in analysis?
13. Need to recognize multigenerational fishing in SBNMS as a cultural activity; there was not enough emphasis placed on this in SOS; Some level of fishing access needs to be maintained
14. If there should be an economic subsidy for fishermen then parity requires there be an economic subsidy for biologists working in SBNMS
15. A common goal we all need to work towards is assess the issues and figure out how to fix problems while keeping everyone in business and have SBNMS be a real sanctuary
16. The Sanctuary is valued by many groups, including commercial users who are economically dependent on their activities within Sanctuary waters and non commercial users.
17. Gloucester recognizes the significant ecosystem that is SBNMSThe MP should be based on the value of this resource and should grow our understanding of how the system works and how various uses of the area may affect the resource

Actions / strategies:

1. SBNMS should be a leader in developing new ocean management policies that place humans within the system rather than managing for how much we can take out of the system
2. Socio economic / financial analysis necessary to study impacts on fishing communities of any regulations on fishing within SBNMS
3. Reduce bycatch within SBNMS by making sure all catch is landed and utilized
4. Do not exclude shipping from SBNMS
5. Both socio economic concerns and science need to be taken into account to locate areas for protection
6. Comprehensive understanding of the economic importance of each portion of the Sanctuary's diverse topography must accompany any contemplated changes in access.
7. Sanctuary can take more positive and active role in fisheries by conducting socio – ec survey of fishing activity in SBNMS: Who fishes in the Sanctuary? Where and when does their activity occur? What is their relative dependence on the Sanctuary? What species do they seek? What gear do they use?
8. Both the immediate as well as the long-term costs and benefits of new measures should be fully analyzed.
9. To ensure a fair review process and the adoption and implementation of improved management measures, the economic impacts of such measures should be fully investigated and analyzed. Such analysis can often reveal that

over the long-term, greater ocean protection accrues significant benefits to both the environment and commercial users such as fishermen.

10. To enable such comprehensive socio-economic analysis, the Sanctuary should invest in baseline data collection to determine the full use and non-use values of the Sanctuary. This should include:the economic benefits of current extractive uses (e.g., commercial and recreational fishing); the benefits of non-extractive uses (e.g. whale watching and tourism); and the non-use existence value to the public locally and nationwide

1.B.5.b use of innovative socio-economic analysis:

Concerns:

1. When performing legal obligations such as socio economic studies traditional methods repeat the concept of valuation for extraction.
2. Relative to a return on investment, traditional economic analysis or paradigms are not effective in that they do not include valuation of ecosystem services and functions or new management regimes.
3. Ecosystem based management suggests there is value in ecosystem component relationships which enhance economic take.
4. Status quo economic modeling is not complex enough to encompass all appropriate economic systems and parameters such as non-use benefits

Actions / strategies:

1. Create cooperative program with business schools to be creative in planning for SBNMS. Look to NPCS and Acadia NP relationship as model. Collaboration for business planning and funding. Business school prepares outline of needs to carry out mission

2.A Need for More Information on Habits and Habitat Use of SBNMS Whales and Other Marine Mammals:

Concerns:

1. Management for marine mammals cannot be done in a box
2. The establishment of sister sanctuaries affords comprehensive protection and increased awareness of migratory animals since animals feeding in SBNMS breed in SBHWS. This sister sanctuary relationship would position the SBNMS at the cutting edge of marine mammal management and assure comprehensive protection for humpback whales.
3. There can be no adverse effects on sand eel abundance from trawling or scalloping in sandy areas or wherever else they reside. Abundance is affected by the environment and interactions with other species (predators and competitors). (see DMF original comments for discussion)
4. DMF: U.K. researchers concluded that climate change may impact upon sand eel populations in the North Sea. They speculated that the southern limit of the species' distribution could shift northward if conditions become warmer, and recruitment might become compromised by rising temperatures. They highlighted that the North Atlantic Oscillation has been in an extreme positive phase during the last half century, and the resultant climate forcing can have major effects on fish populations (perhaps on sand eels). Over the last few years, at least, we've witnessed warmer temperatures in Massachusetts Bay and a northward shift of more southern species (e.g., black sea bass) indicating some important change in sea temperatures.
5. No justification for special management of marine mammals within SBNMS compared with outside. If there is then that should be explicitly stated
6. There should not be discrimination among species of whales for protection.

Actions / strategies:

1. More information on how marine mammals use the sanctuary and how their sex, age, and calving history affect populations is needed.
2. Information on habitat requirements, relationships with other species and human impacts are necessary.
3. Need for more information on habits and habitat use of SBNMS by marine mammals
4. Partner with others for whale protection as an example of how to handle management for animals that use a huge range of habitat such as the great whales. (for example create partnership with managers of breeding grounds)
5. Use the expertise of global and regional research institutions to help inform any gaps in local information
6. Protections established for marmam within SBNMS should apply outside also
7. Whale populations are found spatially and temporal, there should be seasonal increases in research and monitoring as well a speed restrictions
8. The Sanctuary needs to expand its' focus of endangered animals from the Eg to Mn and Bp. These are indicator species of fluctuations in prey populations.
9. SBNMS must continue discussion with the US State Dept and the government of the Dominican Republic regarding the sister sanctuary between SBNMS and Silver Bank Humpback Whale Sanctuary.
10. The Sanctuary should coordinate closely with other efforts and agencies on marine mammal issues, but the revised management plan should reflect the Sanctuary's primary objective to protect resources and allow only those uses that are compatible with that objective.
11. Enact measures to protect aggregations of endangered whales in the SBNMS
12. Tuna industry would support further study on marine mammal forage base in SBNMS. In particular study of the negative impacts of herring mid-water trawl on availability and concentration of prey at levels sustaining frequency and intensity of whale visitation. Mid-water trawl activities cause disruption / elimination of traditional whale - tuna feeding grounds in GoM. Mitigating restrictions should originate by submission of data under cooperative efforts with NEFMC and ASFMC
13. Continue support of existing regional efforts such as the North Atlantic Right Whale Consortium and the Atlantic Large Whale Take Reduction Team

2.A.1 Boundary Modification to Include Related Feeding Habitat for Great Whales (also see 1.A.8: Habitat Boundary Modification):

Concerns:

1. Marmam can use both SB and Jeffreys Ledge for feeding habitat, sometimes using both habitats within the same day
2. Right whales have been observed on Jeffreys Ledge in the fall.
3. When sand eels are scarce on Stellwagen, the whales seem to move to Jeffreys, where herring is an important food source.

Actions / strategies:

1. Expand boundaries to include all of Jeffreys Ledge as it is an alternate feeding grd for large whales

Work Group Name: Ecosystem Alteration

Issues Addressed:

1.A Alteration of Sanctuary Habitat by Human Activity

Issue Description:

The alteration of marine ecosystems and/or habitats by anthropogenic disturbance can come from a variety of human activities. This alteration can be classified into two broad categories,

A) Direct: such as impacts to the seafloor or water column.

A number of scientific studies over the past decade have identified fishing activity as the dominant impact to the marine environment worldwide. Specifically, fishing with mobile gear (such as bottom trawls and dredges) has been characterized as the dominant source of disturbance to the seafloor below the depth of storm penetration. Mobile fishing gear has been shown to reduce seafloor habitat complexity through the removal of emergent fauna that provide structure (such as erect sponges), the removal of structure-building megafauna that produce pits and burrows (such as crabs and fish), and the smoothing of bedforms (such as sand waves). The laying of cables and pipelines, though more limited in the spatial extent of the area impacted when compared to fishing, is another form of direct impact to seafloor habitats.

Another significant source of alteration to the marine environment comes from changes in water quality. Specifically, contributions to changes in water quality can come from terrestrial run-off, outfall pipes, mariculture operations, and other non-point sources such as vessel discharge. Each of these can introduce nutrients, chemicals, fresh water and heavy metals in amounts that exceed a given ecosystem's ability to assimilate the pollutants. Local changes in water quality can kill sessile, structure-forming invertebrates (such as sponges or anemones) and also may change the local distribution of mobile taxa (such as fishes). Issues of water quality will be explicitly addressed in the Water Quality Working Group.

B) Indirect: such as the removal of organisms that ultimately results in impacts to the seafloor or water column through disruption of the food web.

Indirect impacts to marine ecosystems can result from the removal of key taxa from an area, due to fishing activity or changes in water quality. The removal of these taxa can in turn further

impact the ecosystem in a variety of ways. For instance, data from the Gulf of Maine suggest that the removal of Atlantic cod by fishing ultimately contributed to the loss of kelp forests (an important marine habitat), as the urchins on which cod feed became more abundant and consumed the kelp. This phenomenon, termed “trophic cascade,” has been well-documented in the scientific literature.

Background and Regional Context:

The SBNMS is managed as a multiple-use site, and is consequently the recipient of anthropogenic disturbance from a number of sources. Notably, much of the Sanctuary has been fished with mobile fishing gear for more than 100 years, and a fiber optic cable was laid through 19.8 km of the northern part of the Sanctuary in late Summer 2000. The public comment scoping process conducted by SBNMS in 1998, and again in 2002, identified several active and potential sources of anthropogenic disturbance to the ecosystem in the Sanctuary. These sources included:

1) Fishing activity
2) Laying of cables and pipelines
3) Ocean dumping and marine debris
4) Off-shore Mariculture
5) Emerging issues, such as wind farms
6) Coastal activities, such as pollution from land development
7) Dredge disposal

There were also comments collected during the scoping process, attributed to both individuals and to organizations, that suggested that fishing activity was not a significant source of disturbance, that in fact the gear contact with the seafloor may "improve" fish habitat, and that fishing is already regulated more than is necessary by other federal agencies.

Existing Regulations:

- National Marine Sanctuaries Act
- NEFMC Regulations- including WGOMCA, rolling Closures, etc.
- Marine Mammal Protection Act
- EPA Policies
- Dumping Regulations

Who are the Players?

Players are defined here as agencies or institutions that are involved in regional management and enforcement, the major groups or industries that are impacting Sanctuary resources, and other interested organizations or institutions.

Government Agencies (Management and Enforcement)

National Marine Fisheries Service

New England Fisheries Management
Council Massachusetts Division of Marine Fisheries
Massachusetts Water Resources Authority
Environmental Protection Agency
United States Coast Guard
Massachusetts Environmental Police

Industries

- Fishing Commercial:
  - Mobile gear-fish
  - Mobile gear-scallop
  - Fixed gear-fish
  - Fixed gear-lobster
  - Tuna fleet
- Fishing Recreational:
  - Party charter boats
  - Mosquito fleet
  - Whale Watching
  - Ferry Businesses
  - Marine Transportation/Shipping
  - Tourism

Conservation Organizations

- Conservation Law Foundation
- Ocean Conservancy
- Environmental Defense
- International Fund for Animal Welfare
- International Wildlife Coalition
- Center for Coastal Studies
- Whale Center of New England
- Manomet Observatory
- National Audubon Association

Research Universities

- Boston University
- University of Connecticut
- Brown University

University of Massachusetts
Massachusetts Institute of Technology
University of New Hampshire
University of Rhode Island
Woods Hole Oceanographic Institution

Working Group Participants:

SBNMS Staff Team Leader: James Lindholm
SAC Member Chair (1)
Academics (2)
Fishing Industry (3)
Recreational use (1)
Conservation (3)
NMFS (1)
NEFMC (1)
Mass CZM (1)
Technical Rep: Mass DMF

Anticipated Outcomes and Products:

An Action Plan for Addressing Ecosystem Alteration will be developed. This product would summarize what is known about the alteration of the Sanctuary ecosystem and may include a list of necessary research projects on ecosystem alteration, as well as potential management measures to address that alteration.

Proposed Timeline:

At total of five, all-day meetings, once a month will be scheduled from September 2003 to January 2004. Additional meetings may be scheduled to deal with specific topics. These meetings might be sub-groups rather than the entire Working Group.

Related Public Scoping Comments

Issue 1.A Alteration of Sanctuary Habitat by Human Activity:

1.A.1 Fishing Activity:

Concerns:

1. Sanctuary should be protected from gear that tears up the bottom
2. Large midwater trawlers are competing with marmam for food and they fish in close proximity to marmam
3. At least part of SBNMS should be off limits to all fishing
4. How can you call yourself a sanctuary and allow fishing?
5. There are pressing political, scientific, conservation, and other public interest concerns that threaten to be appreciated and dealt with fairly under the existing oceans management process.
6. SBNMS has seen little opposition to no take marine reserves within SBNMS because fishermen thought they had a commitment that that would not happen
7. Concerned about bycatch and discard of that
8. Address regulatory discard problem; Must work towards no dumping of any fish allowed; What goes in net stays in boat
9. Don't believe there was a promise that SBNMS would not regulate fisheries in original sanctuary designation
10. If no fish – no fishermen
11. SBNMS mngmnt plan needs to evolve to acknowledge fishing has ecosystem impacts and needs to acknowledge that some uses (e.g. fishing) are not compatible with goals of NMSA
12. NEFMC has used area closures for mngmnt tool; Use of "no take" areas should be used as part of SB mngmnt
13. SBNMS has a reg not to disturb seafloor; can't see how bottom fishing is legal
14. Is exemption for traditional fishing still appropriate? Answer is no. What is traditional fishing practices? What is traditional fishing has been changing over time (e.g. monofilament line is not traditional)
15. SBNMS regs prohibit take of marmam and sea turtles; fishing takes these species ; this is inappropriate in a Sanctuary and especially for the animals listed as endangered. Take of marine mammals of the scale of fishing would normally require many permits
16. NMSA allows Sanctuary the power to regulate fishing when interfering with SB's primary mission of resource protection therefore SBNMS needs to recognize the contradictions they currently work under and regulate according to the NMSA mandate which is the law / organic statute for the Sanctuary program; regulations must respect that law
17. Need to recognize multigenerational fishing in SBNMS as a cultural activity; there was not enough emphasis placed on this in SOS; Some level of fishing access needs to be maintained
18. The current plan leaves resolution of this fishing impacts issue to the implementation of fisheries management through the MSFCMA, but this approach has not adequately protected Sanctuary resources from the adverse effects of fishing as required to meet the mandate of the NMSA.
19. The special mandate of the Sanctuaries to protect biological diversity while allowing compatible uses differs from the emphasis put on maximizing fishery yields by the NEFMC.
20. The continuation of industrial-scale fishing in most Sanctuary waters with no restrictions aimed at protecting wildlife and habitat seems incompatible with the mandate of the Sanctuary.
21. DMF has assembled draft policies on MPAs with mobile gear impact on habitat being addressed. One policy is that DMF does not classify bottom trawling and/or sea scallop dredging as destructive fishing techniques threatening Gulf of Maine marine biodiversity.DMF does believe there are areas where trawling and sea scallop dredging are ill-advised, and other fishing gear or modified trawls/dredges should be used. Some of those areas might be within the Sanctuary, and we look to Sanctuary staff and research for insights into where those areas can be found.
22. DMF disputes the claim that that fishing restrictions for habitat protection in SBNMS will hasten the recovery of the Gulf of Maine cod stock. (see DMF original letter for discussion)
23. DMF research can provide some insights into location of young of the year cod in GoM. (see DMF original letter for discussion)

24. There can be no adverse effects on sand eel abundance from trawling or scalloping in sandy areas or wherever else they reside. Abundance is affected by the environment and interactions with other species (predators and competitors). (see DMF original letter for discussion)
25. Bottom trawls and dredges impact the seabed, however, there is scientific debate regarding the significance of this impact and whether it should be categorized as a negative impact. The very fact that the resources of Stellwagen have withstood historic fishing effort is evidence that these techniques are sustainable.
26. Because mobile gear fishing tends to occur along historical tows, avoiding areas where the gear is either ineffective or at risk of damage, there is a natural delineation between mobile and fixed areas.
27. Fisheries are depleted and moving down the food chain.

Fishing community concerns:

1. Commercial fishing industry is heavily regulated. Much of SBNMS is closed for 6 months of the year
2. Sanctuary encompasses almost all of the vital fishing grounds for small boat fishermen
3. Industry was supportive of designation due to needs for protection from dumping, drilling, dredging pollution
4. Original DEIS exempts traditional fishing
5. Per original DEIS, fishing management in general would be through NMFS NEFMC
6. SBNMS must be mindful of importance of the area to fishing communities
7. Clear cutting is a false analogy to towing activity
8. There is no indication that there are negative affects on fish populations from bottom trawling. Identify what are effects of mobile gear in habitat destruction? There has been an increase in biomass over dragged areas in Sanctuary
9. Sanctuary already receives protection from the harvesters of the resource who have intimate knowledge of the effects of fishing
10. Sanctuary is currently thriving, fish stocks are recovering (see NEFMC web page)
11. Fish harvesters give access to the consuming public and are leaders in the world as far as responsible fishing
12. No other measures need to be implemented as current fisheries management process addresses all the ecological and biological diversity in Gulf of Maine
13. Recreational anglers are regularly advocates for the environment.; If scientifically proven effective to avoid damage by rec fishers, they would support bag limits, seasonal closures, etc
14. Do not close SBNMS to the commercial or recreational fishing community or recreational boaters
15. At designation fishermen supported SBNMS as they believed there would be no restriction on fishing access. Do not violate that promise
16. The majority of the Sanctuary must remain open to commercial fishermen of all gear types and recreational fishing.
17. SBNMS cannot protect fish because they are migratory
18. Statutory authority exists for NEFMC / NMFS to regulate fisheries, maintain existing authorities
    Don't need more regulation coming from SBNMS; This would be a violation of the commitment from the New England congressional delegation at designation
19. Rules proposed should have scientific backing and sound reasoning – not feel good response
20. Recognize appreciation on behalf of fishing industry to reduce bycatch
21. Discussion of fishing regulations should involve fishermen and include socio economic, biological, ecological impacts
22. If people from NMS have problem with fishermen then they should spend time on their vessels. They do not disrupt the bottom with fixed gear. Certain mobile gear churns the bottom and provides bait and nutrients. SBNMS is a sand bar and is not being disrupted. Nothing out of traps goes back dead. Shutting down areas won't help lobster fisheries because lobsters migrate
23. Tuna fleet opposed to SBNMS creating restrictions on anchoring; No evidence that boats significantly alter the seafloor habitat; Tuna fleets use of the bank is limited to 2-3 months period in a year; This is not sustained use so anchoring is intermittent

24. Not worthwhile to spend federal money to look at issues like recovery rates of ocean bottom from placement of anchors
25. If there is any affect from anchoring that damage is far outweighed by economic value of fishery and recreational benefits of tuna fishing
26. Plymouth, Ptown, Glouc fishermen taking a big hit in fisheries restrictions. Concerned commercial fishermen's access to sanctuary will be restricted by things not naturally explained; They had been told they would never be excluded from SB; Yet it happened….WGoM cut territory; WGoM has already closed 20% of SBNMS to fishing; Cumulative actions reduces access
27. Fishing industry willing to work with SBNMS to create closing habitat areas; Industry observation can assist scientists in determining closed areas
28. SB region is most heavily regulated in country from the perspective of comm. fishermen (NMFS, NEFMC, etc)
29. Concerned that permanent closures will put fishermen out of business
30. Any discussion of fisheries management issues should use existing process, i.e. FMC, state reduction plans
31. Sanctuary should continue to participate in established mngmnt processes when discussing any regs that would affect fishermen; including marine mammals take reduction teams, etc)
32. Fishermen and bureaucrats need to work together and build trust
33. Concerned for more than 1 proposal. Amendment 13 could call for closure of all of SB for year round , permanent closure.This would result in loss of interest by fishermen in mngmnt of SB
34. Commercial fishermen as the eyes and ears of what is going on out in sanctuary and reporting of incidents i.e. oil spills, trash, violations etc.
35. SBNMS should not have role in regulation of commercial fishing Current authorities are adequate and fishermen re familiar with processes and players involved
36. SBNMS should use independent process like that of the FKNMS and CINMS to look at need and designation of marine reserves to protect habitat and biodiversity
37. Fishermen have fear of more closed areas and not having a say in what is decided. Need open and transparent process
38. SBNMS should conduct information discussions with people who are interested in other processes than inshore fishers at other sites
39. Interested in east side of SBNMS that overlaps with WGoM closure including: what is sanctuary investigating, where; what period of time; what results are. make this an open process on the grounds that SBNMS is opposing redrawing WGoM closure due to ongoing research
40. To protect ecosystem and keep it stable need to have commercial fishery for dogfish in sanctuary because they are eating everything
41. Needs to be established sanctuary mechanism written into MP that will only close fishing if comparative science proves fishing is detrimental to habitats and ecosystems
42. Concerned that the MPR will become an excuse to unfairly restrict / blame commercial fishermen
43. SB is important to day boats and mid range boats
44. Concerned about direction MP may go in as far as excluding certain uses; Concerned about knee jerk reactions to "perceived" problems such as trawl impacts; Make sure science is right before taking action
45. One storm causes more damage than all fishing activities
46. Legal counsel or payment of legal counsel for fishing industry issues should be provided
47. Gulf of Maine Fishermen's Alliance is opposed to any restrictions to commercial fishing in sanctuary
48. North Shore Community Tuna Assoc statement is that ; Members have historically fished in sanctuary for generations; There should be no changes or limitations to tuna fishing activities
49. If any areas are closed in SBNMS for fishing then other areas must be opened
50. No area trade offs
51. How can you have a no take zone when these are public resources
52. Fishing community is part of public – should be compensated for any losses occurring with this processConcerned that radical environmentalists want to make SBNMS a marine reserve; If a closure is for research that is different
53. What can we do to make it better for fishermen? (new regs doesn't make it better)

54. Close the bottom to human use; This will help restore the bottom habitats and provide data for further understanding of trawling
55. Protect the resources of SBNMS but not at the expense of peoples livelihoods nor the ability to whale watch or fish
56. SBNMS is important to charter boats and recreational boats due to proximity to ports. Charter boats have recently suffered loss due to sever restrictions limiting cod catch. Charter mortality of juvenile fish is nearly zero. Charter boats provide important data to managers to determine cod stocks. NMFS / NEFMC have already restricted charter boats. Charter fishing does not damage the environment and should not be precluded from SBNMS. Draggers and gill-netters could be closed out due to their many impacts on the environment including bycatch of seabirds and marine mammals
57. Do not close SBNMS to Tuna fishing. This is an important supplement to incomes and local economies
58. BHLA does not support any management plan changes that further restrict commercial or recreational fishing from with in the portions of the bank that remain open including any additional area closures or other new restrictions for the purpose of preserving or limiting access to wrecks or other underwater sites of cultural significance.
59. Tuna Assoc. is concerned with expansion of role and mandate and efforts to find additional vehicles to harass and regulate commercial fishermen.

Actions / strategies:

1. Assess destruction of seafloor from fishing gear and regulate this more strictly than existing regs.
2. Study the effects of fishing on the sanctuary.
3. Ghost gear should be monitored and engage in a clean up such as IFAW / MADMF project of a few years ago
4. Provide the “compelling evidence” that supports ongoing “destruction of marine habitat” in SBNMS
5. Make decisions on solid information and include stakeholders
6. Allow studies on impacts to reach conclusions before acting
7. Assess how much of SBNMS is actually towed or towable.
8. Assure fishing is done in a responsible and sustainable way including fish caught and damage to the bottom
9. Eliminate dragging on the seafloor to protect bottom inhabitants and prey species
10. At least part of the sanctuary should be off limits to all fishing
11. Study the affects of mid water herring trawl gear on the destruction of the food chain; This is not a historic fishery….only occurring in last three years
12. Better manage commercial trawl fishing in SBNMS
13. SBNMS needs to spearhead research on ocean ecosystems and sustainable fisheries management
14. Restrict the number of commercially owned fishing vessels in SBNMS
15. Promote legislation that requires sustainable fishing.
16. Help managers implement existing laws that govern fishing.
17. If unable to outright ban all fishing from sanctuaries then at least limit it to non destructive and sustainable activities.
18. Keep SBNMS open to all forms of recreational rod and reel fishing
19. Assess economic impacts of ban on recreational fishing from SBNMS
20. Allow folks (Rec + Comm)to harvest fish in a sustainable way (like present mesh size, hook size, etc).
21. Use of the diversity of literature on fishing effects to determine if such effects are likely to occur at SBNMS. If so, develop alternatives for marine reserves within SBNMS such that all habitats (as proxies for communities of organisms) are represented.
22. The Sanctuary managers should state clearly what problems have been unresolved under the current management system.
23. Discussion of fishing regulations should involve fishermen and include socio economic, biological, ecological impacts
24. If commercial fishing not allowed in SBNMS then redraw lines of SBNMS or trade area so fishermen can still work the bank; and SBNMS must work with other regional authorities to keep the area open to fishing
25. Work with processors to be able to market anything caught in fisheries rather than target species
26. No dumping of hagfish remains in SBNMS
27. Prohibit “larger” trawlers from being on the Bank; Larger determined by net size / drag width/ hull size (Many of these vessels are already restricted due to roller size limits)

28. Fishing for herring should be outlawed.
29. Sanctuary needs to calculate and evaluate reduction in fishing effort on bottom since ’92
30. NE seafood coalition recommends that any activities / proposals affecting commercial fishing in SBNMS need to be directed to coalitions so they have ample time for comment
31. Need to understand what areas are trawled and what % of SBNMS is fished
32. Assess the scope of the problem of bycatch of seabirds, marine mammals
33. Some fishing gear should not be used (e.g. bottom trawls and scallop dredges)
34. Establish “no mobile gear” areas
35. Commercial fishing should be maintained as long as it is not destructive (bottom trawling)
36. Allow sustainable commercial fishing through sustainable regulations. Not “all or nothing”
37. SBNMS should assist NEFMC by identifying habitat that provides important shelter and food sources (example cod / flounder)
38. Honor the “promise” made at designation the SBNMS would not regulate fishing
39. Review legislative record to find evidence of that promise
40. SBNMS should consider restocking efforts
41. Improve public awareness of existing fisheries regs in SBNMS; Some areas already closed to fishing; include awareness of 12 inch restriction on roller size on mobile gear
42. SBNMS should become model for nation for sustainable fishing
43. How do we make for a better fishery besides more reg. There is a role for SBNMS in fisheries enhancement not management
44. The current trawl exclusion zone covers only a corner of the Bank and that with a sandy bottom. While the best plan would exclude all trawl activity, this is politically unlikely. However, included in the no disturbance zones should be a larger block of the sanctuary which includes cobble bottoms. There should be a representative and contiguous set of bottom habitats protected from disturbance. There has been damage from trawl activity which might be remedied by allowing areas of hard substrate to recolonize.
45. There should be a moratorium of commercial fishing for five years. Regulation of fishing within the sanctuary should encompass no take marine protected zones
46. No fishing while whales are in the area.
47. Create a site specific fisheries management plan for SBNMS; Note CA dept of Fish and Game plan
48. Establish a cooperative research partnership with fishermen. Sanctuary could play valuable role in rationalizing fisheries management while adhering to its mission of protecting and enhancing the human and natural resources within its boundary
49. Establish outreach program for fishermen. Many fishermen are unaware of Sanctuary and potential changes that may impact them. Include federal fishing permit holders on correspondence lists
50. Sanctuary should consider undertaking a long term program of applied research in fisheries: Integrate with and complement existing projects. Provide more detailed and timely data to NMFS and NEFMC. Work with fishermen in new and existing coop research projects including (but not limited to) Projects funded by Cooperative Research Partners Initiative; Projects funded by the Northeast Consortium
51. Sanctuary managers can and should take all appropriate steps to regulate fishing activities, in cooperation with the NEFMC, to ensure that SBNMS resources, both living and non-living, are protected and, where necessary, restored.
52. If fishing activity limitations are deemed necessary, a wide range of comprehensive alternatives should be considered, including Sanctuary-wide measures (such as gear modifications) and zoning options (such as partial closures and gear restrictions).
53. Stellwagen Bank is a biodiverse area and management decisions should be based on the ecosystem, not on fisheries, or species-specific issues.
54. Use rotating, or permanent areas closed to fishing (especially with gear that adversely affects the seafloor habitat) on Stellwagen Bank.
55. Can the Sanctuary can accept impact of bottom trawling and sea scallop dredging as inevitable and acceptable consequences of catching valuable fish and shellfish and the economic value that catch produces for the Commonwealth's seafood industry?

56. Could any of the New England Council's Amendment 13 proposed alternatives to minimize impact of fishing on EFH satisfy the Sanctuary's concern about protection of bottom habitat.
57. Sanctuary reaction to this Amendment 13 option will send a clear message to those participating in the on-going Sanctuary Management Plan Review about where the Sanctuary is heading. Will Sanctuary staff want an Amendment 13 focus on hard, complex bottom only or will all the area in the proposed westward extension be supported? How will the Sanctuary position on these options impact the success of the next steps in Management Plan review (e.g., Action Plan development)? Will the Sanctuary support this option that opens a large portion of the Western Gulf of Maine Closed Area and therefore be supporting a return of fishing to those reopened habitats.
58. If the Sanctuary Plan is to include areas requested of the Fishery Management Council for closures to trawling and scallop dredging to improve survival of ages 0 and 1 cod, the Plan must first make a compelling case as to how areas that historically have had low abundance of young stages of cod can be transformed to mimic very productive inshore areas.
59. Regulatory measures altering the delineation between fixed and mobile gear should only be done as part of a management plan addressing the needs of the region.
60. Management plan must embraces historical fishing activity and resist any pressure to allocate its resources through closures or some form of zoning.
61. No future dredging on seafloor

1.A.2 Laying of Cables and Pipelines:

Concerns:

1. Concerned about the impacts of fibre optic maintenance in ecosystem
2. Installation of cable landfalls using laybarge technologies may create the potential for oil spills and introduced turbidity in particularly sensitive intertidal areas, and mitigation measures should be required to address this threat.

Actions / strategies:

1. Without well researched and documented facts on effect to sanctuary resources and qualities the new management plan should continue to restrict any pipelines from being laid across the area or in its immediate vicinity.
2. Ban the laying of fibre optic cables in SBNMS
3. Keep oil / gas pipelines and other such projects out of SBNMS
4. Special consideration should be given within SBNMS for energy interests such as pipelines, cables
5. Ensure appropriate monitoring of fibre optic cable; if new company takes over they need to pay for monitoring6. SBNMS should not allow any more special use permits until protocols are determined and appropriately reviewed (i.e. fibre optic cables; wind farm, etc)
6. Department of Commerce must use all legal means available to pursue funds committed by fibre optic cable permitee which is now bankrupt. These funds are critical to determining and monitoring of the impacts of cables
7. Specific cable routes must be evaluated on a case-by-case basis to ensure that important biological resources are not adversely impacted by such construction.
8. The process of permitting new commercial submerged cables through the waters of the sanctuary should put the burden of proof to demonstrate “no harm” on the project sponsors.
9. Cable corridors should not be treated as a franchise which it is the automatic right of Sanctuary managers to sell, but rather presented as a challenge submitted to the project sponsor to demonstrate both the need for, and the innocuous impact of, each specific routing and installation technique.

1.A.3 Ocean dumping / Marine Debris:

Concerns:

Actions / strategies:

1. Provide better education and outreach on this issue, develop a boater / marina education program
2. Create a marine debris information page on the website

3. Permit dumping of crematory ashes by commercial boats within SBNMS
4. Prohibit dumping of caskets and bodies within SBNMS
5. Control littering and marine debris
6. There should be no discharge of any sort within SBNMS; There should be no discharge of any sort within any sanctuary
7. Maintain allowance to dump crematory ashes there
8. SBNMS needs to do better monitoring and cleaning up of ghost gear
9. Expand existing outreach efforts for marine debris and non point source pollutants
10. Sanctuary should consider initiating a program to assess and remediate ghost gear impacts. There are excellent examples of cooperative efforts involving the fishing industry aimed at clearing away such derelict gear.

1.A.4 Introduction of Exotic Species:

Concerns:

1. Concerned about the potential introduction of invasive species
2. Ballast water discharges and bilge pumping have been implicated in altering the species mix of many coastal areas by introducing the larvae of invasive species.
3. Large numbers of cruise ships and shipping traffic comes through the Sanctuary en route to or from Boston Harbor which presents such a threat to SBNMS.

Actions:

1. Sanctuary must become a no discharge zone for all vessels
2. Add invasive species to research that needs to be performed
3. Work with shipping industry and others to find resolution to ballast water problem and other methods of invasive species introduction
4. Preventive measures to preclude the introduction of invasive species, are well within the purview of the management plan review and should be pursued as part of this process, such as: restricting ballast water discharge within Sanctuary waters, requiring offshore ballast water exchange and encouraging the development of ballast water treatment facilities in major ports,
5. SBNMS should consider such activities as the disposal of ballast water and the dumping of fish waste and the risk that they pose for introducing marine invasive species into the sanctuary.
6. Monitor gray water discharge for invasive species
7. Work with shipping industry and others to find resolution to ballast water problem and other methods of invasive species introd

1.A.5 Mariculture Activities:

Concerns:

1. Potential impacts on SBNMS from mariculture activities unknown
2. Concerned about commercial mariculture; Too many unresolved questions and lack of regulations Should be no mariculture in SBNMS
3. Aquaculture is essentially non existent in US; most is inland; less than 2% seafood produced in US is AQOffshore Aq (EEZ) can be important. Concerns exist with salmon farms in Maine (pollution, feed, antibiotics, genetics)
4. Surf clam Aq is environmentally benign as opposed to salmon; No selective breed genetics. SW corner of SBNMS was dredged extensively 15 – 20 yrs ago This area can be used for aq because it is shallow (60 feet at low tide)
5. No clear Fed authority for aq ops in EEZ
6. Becoming too dependent on other countries for food
7. Confusion was expressed as to whether mariculture was allowed or not. Historically, there had been one research permit given to study the issue. However, the research was never done.

8. Not all research is appropriate for Sanctuary. The benefits of the Sanctuary for research are due to their status as natural systems. Artificial systems such as mariculture is not appropriate in this natural setting. There is too great a potential for serious environmental impacts on the natural system.

Actions / strategies:

1. Do not allow Aquaculture within SBNMS
2. Create aquaculture plan; Do not allow a marine feed lot within SBNMS
3. Mariculture activity might be investigated as a replenishment tool.
4. Mariculture activities should be forbidden until there is much better understanding of the ecological stresses that will occur within a habitat/ecosystem due to mariculture activities. When assessing impacts of general and specific mariculture activity within the sanctuary the Precautionary Principal (see Lisbon Principles) must be used.
5. Mariculture activities should not be allowed within the Sanctuary due to water quality issues, entanglement concerns, and concerns of private commercial use of Federal waters.
6. Lift the specific ban on aquaculture in the sanctuary in favor of a suitable review process that would determine the compatibility and value to society of any proposed activity.
7. The potential impact of offshore mariculture have proven nearly impossible to measure at the research sites currently exploring its potential. For more information visit the Web sites of the NOAA-sponsored activities:Gulf of Mexico Offshore Aquaculture Consortiumhttp://www-org.usm.edu/~ooa/index.htmHawaii Offshore Aquaculture Research Project (HOARP)http://www.soest.hawaii.edu/SEAGRANT/special_projects.htmlUniversity of New Hampshire Open Ocean Aquaculture Programhttp://www.ooa.unh.edu/

1.A.6 Emerging Issues (wind farm, etc):

Concerns:

1. SBNMS is not prepared to manage emerging proposals for permitting
2. SBNMS must not manage by crisis management
3. Concerned about lack of policy regarding wind mills and permanent structures
4. New industrial uses of the ocean in and around SBNMS for fiber optic cables, gas pipelines and wind farms call for proactive planning to ensure the protection of marine resources and ecological processes within the Sanctuary.
5. An emerging Sanctuary resource management issue is protection of biodiversity. Protecting marine biodiversity is a relatively recent objective, and it can be ambiguous.
6. Sanctuary needs to consider if they have adequate ability to control; new industrial uses such as cables and wind farms
7. Concerned about for profit industries buying access and usage of SBNMS (Fibre optic cables; windfarm; others?)

Actions / strategies:

1. No permanent structures should be allowed in SBNMS such as platforms, windmills, barges
2. Current wind energy discussion could draw greater public attention to resource exploitation
3. SBNMS should exclude additional development such as cables and wind farms
4. Develop mechanism to monitor regional activity to identify emerging issues
5. SBNMS regs need to address impacts outside and review activities outside (e.g. wind farm and wave energy proposals at OCNMS)
6. SBNMS should address new and emerging issues that have come to light since original MP, Habitat degradation; overfishing

1.A.7 Impacts of Coastal Activities:

Concerns:

1. Coastal areas are linked to offshore areas; Need to protect both
2. Land development is causing pollution which is contributing to marine resource problemsSBNMS needs to recognize links with shore; Determine if there is direct impact on SBNMS

3. Coastal areas are not directly linked with us but there is still an interrelationship that needs to be acknowledged

Actions / strategies:

1. Create control area outside SBNMS ; Need sites closer to shore for monitoring of impacts
2. There should be an effort to correlate point sources on land to the sanctuary water quality over an extended period of years. Other agencies should be asked to contribute to this effort.
3. Freeze new activities in the Sanctuary, to provide near term stability to sanctuary resources
4. New uses, particularly those of an industrial or extractive nature, would have to demonstrate that they would not substantially affect the sanctuary's resources before they would be permitted.

1.

1.A.9 Dredge Disposal:

Concern:

1. The western boundary of the Sanctuary abuts the Massachusetts Bay Disposal Site.

Action:

1. Monitor activity at MBDS
2. Maintain regulation of no dredge disposal in SBNMS

1.A.10 Impacts of Pollution:

Concerns:

1. Human induced environmental stresses / bioaccumulation of toxins in food web

Actions:

1. Research implications of pollutant loading on food web
2. Monitor bottom sediment along with water quality for toxins and pollution; must know status of this to know health of system; this is responsibility of SBNMS to know status of site
3. Point and non-point source discharges should be monitored to identify the source of any contaminants that adversely impact the Sanctuary habitats. There should be an effort to correlate point sources on land to the sanctuary water quality over an extended period of years.

Work Group Name: Ecosystem Management

Issues Addressed:

1.C Need for comprehensive ecosystem protection

Issue Description:

Ecosystem Management (EM) arose in the late 20th Century to address the pervasive scientific uncertainty inherent in natural systems and the failures of single species management approaches to adequately address that uncertainty. The concept of an ecosystem, on which any discussion of ecosystem management depends, can be defined as a biological community together with its associated physical environment. [1] In the context of the marine environment, this would include all marine organisms as well as the physical properties of the water column and the seafloor. A working definition of EM (currently in use at the Channel Islands National Marine Sanctuary) is the following:

> Ecosystem management integrates scientific knowledge of ecological relationships within a complex sociopolitical and values framework toward the general goal of protecting native ecosystem integrity over time. [2]

Most of the research on, and the application of, EM has occurred in terrestrial systems thus far. In a terrestrial context, EM has been defined in a way that elaborates the above definition,

> "…management for ecosystem processes, such as nutrient cycling, energy flow, and water flow; landscape processes such as succession, fire, and other natural disturbances; and native species processes, such as migrations, multiple life history strategies, multiple functional guilds, and evolution of species and other levels of biological diversity."[3]

Where "traditional" resource management has focused on extractable *resources* (such as fish), the goal of EM is to manage the *sources* from which these extractables come, i.e. the ecosystems that support the fish.[4] In so far as it is human activities that are actually managed, the distribution of human uses of the ecosystem is also a critical component of EM.

Background and Regional Context:

The public comment scoping process conducted by SBNMS in 1998, and again in 2002, identified several concerns relative to need for comprehensive ecosystem protection and conservation of biological diversity at the SBNMS. Concerns in this regard included the development of general ecosystem based management practices and zoning within SBNMS including no-take reserves.

The SBNMS derives its mandate from the National Marine Sanctuaries Act (16 U.S.C. 1431 ET. SEQ. as amended by Public Law 106-513). The Act identifies the National Marine Sanctuary Program as,

> **(4) a Federal program which establishes areas of the marine environment which have special conservation, recreational, ecological, historical, cultural, archeological, scientific, educational, or esthetic qualities as national marine sanctuaries managed as the National Marine Sanctuary System will-**
>
> A. improve the conservation, understanding, management, and wise and sustainable use of marine resources;
> B. enhance public awareness, understanding, and appreciation of the marine environment; and
> C. maintain for future generations the habitat, and ecological services, of the natural assemblage of living resources that inhabit these areas.

As the Sanctuary is not an ecosystem unto itself but rather part of the much larger Gulf of Maine ecosystem, the application of EM to the SBNMS can be approached along two parallel tracks. First, the application of EM at the SBNMS will involve the intensive collaboration with other regional agencies charged with managing components of the ecosystem beyond the Sanctuary boundaries. Second, for management within the Sanctuary boundaries, the guiding principles of EM can be used in an ecosystem-based management approach where an obvious sub-set of the larger ecosystem is being managed.

There are no comprehensive EM plans in the southern Gulf of Maine at this time. The SBNMS currently regulates the mining of sand and gravel, disturbance of the seafloor (with the notable exception of fishing activity), and dumping of waste material within its boundaries. Fisheries management in the Federal waters of the region is conducted on a species by species basis. Similarly, though the Atlantic Large Whale Take Reduction Team has grouped a number of large cetaceans under its auspices, the Marine Mammal Protection Act is also enforced on a species by species basis.

Existing Regulations:

- Clean Water Act
- National Marine Sanctuaries Act
- NEFMC Regulations- including WGOMCA, rolling Closures, etc.
- Marine Mammal Protection Act
- Endangered Species Act
- Dumping Regulations

Who are the Players?

Players are defined here as agencies or institutions that are involved in regional management and enforcement, the major groups or industries that are being managed, and other interested organizations or institutions.

Government Agencies (Management and Enforcement)

National Marine Fisheries Service
New England Fisheries Management Council
Massachusetts Division of Marine Fisheries
Massachusetts Water Resources Authority
Environmental Protection Agency
United States Coast Guard
Massachusetts Environmental Police

Industries

Fishing Commercial:
Mobile gear-fish
Mobile gear-scallop
Fixed gear-fish
Fixed gear-lobster
Tuna fleet

Fishing Recreational:
Party charter boats
Mosquito fleet
Whale Watching
Ferry Businesses
Marine Transportation/Shipping
Tourism

Conservation Organizations

- Conservation Law Foundation
- Ocean Conservancy
- Environmental Defense
- International Fund for Animal Welfare
- International Wildlife Coalition
- Center for Coastal Studies
- Whale Center of New England
- Manomet Observatory
- National Audubon Association

Research Universities

- Boston University
- University of Connecticut
- Brown University
- University of Massachusetts
- Massachusetts Institute of Technology
- University of New Hampshire
- University of Rhode Island

Working Group Participants:

SBNMS Staff Team Leader: James Lindholm
SAC Member Chair (1)
Academics (3)
Fishing Industry (2)
Conservation (2)
Recreational Use (2)
NMFS (1)
NEFMC (1)
Mass DMF (1)
Mass CZM (1)

Technical Advisors:
Technical advisors will provide supporting data to the Sanctuary, and may provide presentations on particular topics directly to the working group.

Anticipated Outcomes and Products:

A Comprehensive Action Plan for Ecosystem Management will be developed. This document will identify the important elements of ecosystem management for SBNMS, including an outline for a long-term strategy for implementing the framework, as well as an articulation of additional data needed to drive the framework, and potential regulations to support the framework.

Proposed Timeline:

A total of five all-day meetings, once a month from September 2003 to January 2004. Additional meetings may be scheduled to deal with specific topics. These meetings might be sub-groups rather than the entire Working Group.

References:

[1] Ricklefs, R. E. 1990. Ecology. W.H. Freeman and Company, New York.

[2] Grumbine, R.E. 1994. What is ecosystem management? Conservation Biology 8: 27-38.

[3] McNeely, J.A. 2003. Ecosystem management in the 21st Century. Contributed to the IUCN Steering Committee Meeting of the Commission on Ecosystem Management, Taman Negara, Malaysia.

Related Public Scoping Comments:

1.A.8 Boundary Modification:

Concerns:

1. Jeffreys is an important herring spawning ground. Herring are an important commercial and prey species
2. Recreational fishermen might support boundary expansion if it to prevent drilling, preventing waste disposal, improve water quality, preventing alteration of seafloor; then perhaps there are merits
3. How were original boundaries designated? They seem to be arbitrary
4. There is an interchange/ interdependency between Jeffrey's and Stellwagen by at least some of the feeding whales found on Stellwagen. This was evidenced between 1990 and 1995 when the population of sand lance on Stellwagen declined and many individually identified humpback whales were then found to be feeding on Jeffrey's Ledge
5. As fishing effort shifts due to declined stocks and closures there may be a temptation to look to other species. Herring represent one such temptation. Herring stocks are not well understood. Increased herring fishing effort may have untold effects on the Jeffrey's Ledge ecosystem including displacement of feeding animals, entanglement concerns, and unknown effects on herring spawning.
6. Should Jeffrey's be included in the Sanctuary, the current management scope is insufficient to protect resources that use both habitats. Also there may be issues unique to Jeffrey's that would require a change in the scope of the current management mandate.
7. There would likely be severe backlash from fisheries at the idea of an expansion of the Sanctuary boundaries. The presumed argument from fishermen being that Sanctuary management would be another regulatory overlay on an industry already under considerable regulatory weight.
8. Jeffrey's Ledge is susceptible to the same pressures as Stellwagen including issues of contaminant outflow from the Merrimack River and issues of shipping lane traffic
9. The justification for extending boundaries is to provide ecosystem protection with minimal human disturbance. This will provide areas where ecosystem goods and services can function with minimal stresses from human activity.
10. There is documentation of the severe degradation of coastal and benthic habitats, of pollution in coastal waters; and of the fishing crisis. Expanding the boundaries will provide sites for recovery of species and protection of feeding habitat.
11. Due to SBNMS boundaries Jeffreys Ledge is in the unusual situation of receiving official protection for a small part of its area and the part of the ledge that data indicates is the least biologically important part for marine productivity and marine life.
12. Jeffreys Ledge meets all of the criteria for which Stellwagen Bank received official protection. It is an area of high topographical relief, which leads to upwelling and important marine productivity; it is an important feeding ground for marine mammals, sea birds, ground fish, and other marine predators; it is an important area for traditional fisheries, because of its proximity to the well-developed coast of northeastern Massachusetts, New Hampshire, and southern Maine, it is vulnerable to human-induced habitat degradation.Survey data collected from both trawls and, more recently, hydro-acoustic surveys indicate the Jeffreys Ledge is the single most important spawning habitat for the Gulf of Maine stock of herring (Clupea harengus). Herring are an important prey for marine mammals, including humpback, fin, and minke whales, Atlantic white-sided dolphins, Long finned pilot whales, and several pinnipeds, ground fish including cod and haddock, and predatory fish including blue fish, striped bass, and bluefin tuna. Combined with sand lance (Ammodytes spp.), herring are the primary baitfish upon which the Gulf of Maine ecosystem depends. 13. Jeffreys Ledge is an important habitat for North Atlantic right whales.Right whales have been an important component of SBNMS programs for many years, despite the fact that their presence within the boundary of the Sanctuary as it currently stands is uncommon. Recent published work done by WCNE (reprint included) has indicated that Jeffreys Ledge may be a key fall feeding habitat for right whales. Expansion of the boundary could allow additional protection for this species in an important part of their range.
13. Jeffreys Ledge also acts as a buffer zone in many years for many of the marine predators that use Stellwagen Bank. In numerous years when the cyclical sand lance populations have been low, many of the marine mammals and fish species that are often found on the Bank move to either Jeffreys Ledge or the Great South Channel. While the Channel is still a habitat based on sand lance prey, the Ledge represents a true buffer for the Stellwagen ecosystem. This has been published in a peer-reviewed article, a copy of which is included.

14. The SBNMS boundaries are arbitrary when compared with the natural system they are there to protect other than the inclusion of the length of Stellwagen Bank. Expanding the boundary to include Jeffreys Ledge would bring them into the realm of being biologically realistic and scientifically defensible.

Actions / strategies:

2. Sanctuary boundaries must be expanded to include habitat critical to well-being of marine wildlife such as Jeffreys Ledge
3. Do not expand current boundaries of SBNMS, plenty of closed areas already to protect biomass
4. SBNMS should redefine its boundaries to capture as a consistent "whole" that set of conditions to which it can best apply a rigorous management approach-This approach should include a system of marine zoning to place levels of protection consistent with vulnerability of species or ecology in specific areas-This should be done in concert with NEFMC and NMFS
5. We oppose expanding the Sanctuaries current geographical boundaries
6. Extend the boundaries of the park to the sea shore in Cap Cod and the North Shore.
7. Build a partnership with the TTOR to have a land-sea sanctuary that surrounds Boston.
8. Create an event in which people make the great tour on land and sea!
9. Examine current boundary for ecosystem representation
10. Examine boundary for user group representation; Don't impact one industry more than another
11. Any expansion of SBNMS boundary should be clearly documented through investigation with reasons for doing so
12. Keep existing boundaries for benefit of recreational and commercial fishing industry
13. Boundaries of SBNMS are sufficient- maintain existing boundaries and access for consuming public through comm. Fisheries
14. Expand boundaries to include Jeffreys Ledge to create buffer area for wildlife and incorporate different whale habitat; to encompass different habitat than currently contained
15. Establish additional sanctuary areas or expand boundary to adjacent areas; Create connecting corridor if non contiguous areas
16. Area is too big, bigger than the actual bank. Boundaries should be reduced
17. Reconstruct SBNMS boundaries to include areas already closed for 10 years
18. Do not increase size of SBNMS until Congress mandates purpose of NMS's and MPA's Fishermen in favor of MPA's if scientifically proven to have diverse habitat and smallest size possible to be scientifically significant
19. The boundaries of the Sanctuary should be extended to incorporate Jeffrey's Ledge and Scantum's Basin.
20. Sanctuary management should be assessing whether there are other areas that would expand the diversity of habitat within the sanctuary and consider incorporating those. The Sanctuary should be enlarged to an area inclusive of various habitats so more open ocean ecosystems will be recognized and protected. (ex. Great South Channel)
21. Extend boundaries to include Jeffrey's Ledge and more of Cape Cod Bay; into shore in at least 2 places (recommendation: 1. tip of Cape Cod which is already part of National Seashore and around on the inner cape to the Audubon Sanctuary in Well fleet; 2. Great Salt marsh which extends from Gloucester north to southern NH which includes Plum Island and the Federal Wildlife refuge).
22. Expansion should be based on whether there are the resources to protect and not through giving away political concessions or compromises whereby management can't protect the new area and it's resources.
23. Provide protection for the buffer zone around SBNMS
24. Any consideration of boundary expansion should include analysis of appropriate management measures to be implemented within any newly included area(s).
25. The extent of management actions within any new area(s) should be based on the reason for inclusion in the Sanctuary, and the specific conservation objectives to be achieved within.
26. The current boundaries of the SBNMS should not be modified at this time. SBNMS must show successful management and a clear vision of the current site before expanding the area. Any current expansion will result in diluting resources and creating a "paper Sanctuary" that will not only be of no benefit to the additional area, but will create hardships for the existing one.

There is no reason to expand the boundaries or to change them in any way. The Sanctuary already poses a challenge for its administration, including research, monitoring, and enforcement. A continued focus on the Stellwagen Bank area and an avoidance of the likely conflict with the fishing industry that will occur if the Sanctuary's scope is widened to include areas such as Jeffrey's Ledge. First identify what needs to be done in the existing Sanctuary; Make a compelling case for those changes; Evaluate the consequences of those changes. If benefits prove to be significant, then consider a Sanctuary expansion based on results and not supposition.

1.C Need for Comprehensive Ecosystem Protection:

1. Work using reserves in the Florida Keys National Marine Sanctuary demonstrates the benefits to Sanctuary resources – in only a few years, habitats and some wildlife are already showing clear improvements. SBNMS resources can similarly benefit from no-take marine reserves.
2. As impacts upon the Gulf of Maine's environment grow and marine resource management becomes more complicated, Ocean is as valuable resource as are land resources; Tying together land and ocean is good to provide understanding of linkages; So much land is protected and so little ocean; Need to identify areas within SBNMS to deserve more protection; If willing to protect land, w ocean
3. Survey shows strong public support (7/10 in the NE) for greater protection in SB management regulations were handed down during congressional designation.

1.C.1 Zoning on SBNMS including no take reserves:

Concerns:

1. Compelling scientific evidence supports the establishment of no take marine reserves and provide undisturbed research areas
2. Recreational fishermen will not support blanket closures and full ban on recreational fishing
3. Developing an MPA is not a responsible alternative to fishing conservation measures such as length, gear and bag restrictions
4. Creating a refuge from fishing activity will protect fish stocks within the sanctuary but also establish a source of recruitment for commercial, recreational and other stocks throughout the Gulf of Maine.
5. A refuge would also provide a much needed research site for analyzing the effects of various fisheries practices.
6. There is need for a true marine sanctuary:to ensure the protection of marine wildlife and wildernessto provide a baseline against which the efficacy of resource management can be assessed, to provide a mechanism for rebuilding overfished stocks,to ensure that overfishing does not occur again.
7. Had the relative risks assessment of the SBNMS been done, fishing impacts, as well as the long-term impacts on fishers of centuries of lousy management, would both have been dealt with explicitly
8. There are pressing political, scientific, conservation, and other public interest concerns that threaten to be appreciated and dealt with fairly under the existing oceans management process.
9. A good first step would be the establishment of a Stellwagen Bank Totally Protected Area- in perpetuity.
10. When determining role for SBNMS for no take zones. Consider other agencies and closures; Create a matrix of other agencies activities to avoid redundancy What is the responsibility of SBNMS; Know the purpose of the no take zone you want. What is the process to determine no take zone? How do you think through process for deciding no take? Learn from other sanctuary sites. SBNMS can provide information, research, etc; provide control site / no take
11. Concerned about SBNMS closing areas; This is a change from the original management plan
12. Progress in establishing research reserves via the NEFMC process remains uncertain. This process, begun in 1998, has since stalled. Despite a year of preliminary scoping, Council approval in 2000 to fully develop the proposal, and an even more urgent need for the information and comprehensive resource protection such sites can provide, progress on this initiative has lapsed behind action on other fishery management issues.
13. Fishermen have fear of more closed areas and not having a say in what is decided. Need open and transparent process
14. There is a rapidly expanding body of research on the effectiveness of fully protected no-take marine reserves in enhancing marine ecosystem function and protecting and restoring marine habitats and the biological communities they

support. This research strongly supports the establishment of marine reserves as essential components of any marine ecosystem management strategy.

15. Since the designation of SBNMS in 1992, an increasingly large body of scientific research and peer reviewed literature, has provided strong evidence for the effectiveness of marine reserves in restoring and protecting marine habitats and marine biological communities and in providing undisturbed areas for scientific research.
16. A comprehensive system of marine reserves in which no extractive and otherwise harmful activities would be allowed, should be a central component of any strategy to ensure the integrity of Stellwagen's marine biodiversity and ecosystem.
17. Currently less than one percent of US waters are fully protected.
18. No-take marine reserves are singularly well suited to, and necessary for, achieving the Sanctuary's purpose: "to maintain the natural biological communities … and to protect, and, where appropriate, restore and enhance natural habitats, populations, and ecological processes."
19. The pioneering it is increasingly urgent that managers consider better use of MPAs including no-take reserves.
20. To date, there are no no-take reserves in SBNMS. The Sanctuary can and should lead this effort by establishing an inclusive process to designate scientifically based no-take reserves with clear objectives within Sanctuary boundaries.
21. The only sites limiting fishing in the Sanctuary have been established under the Magnuson-Stevens Fisheries Conservation and Management Act (MSFCMA).
22. There are differences between the MSFCMA and the NMSA, and the results when management actions under one law are not designed to meet the mandate of the other. A primary objective of the MSFCMA is to secure the optimum yield from commercial fisheries. In contrast, the NMSA's mandate is to protect natural biological communities, and restore and enhance them where necessary.
23. It is time for the Sanctuary to fulfill the mandate of the NMSA and complement the efforts of other agencies by leading a process to establish scientifically based no-take marine reserves in SBNMS, sufficient to protect resources and restore ecosystems.
24. No-take marine reserves established by the Sanctuary will fill a void met by no other entity in the Gulf of Maine by providing comprehensive resource protection and relatively undisturbed sites for research that are not subject to disruption caused by changes in other management regimes.
25. No-take zones will enhance understanding of ecosystem functions.
26. DMF supports establishing marine reserves only when there are very specific, unambiguous, attainable objectives and when there will be effective, timely monitoring to determine success of reaching reserve's objectives. Those objectives must be consistent with fisheries managers' plans to improve stock status and enhance habitat protection. Any consideration of a reserve(s) in the Sanctuary must be very carefully considered and well justified. Stakeholder involvement in MPA (i.e., reserve) identification and support for implementation are critical elements of a successful MPA.Any consideration should avoid use of a Sanctuary reserve as an element of precautionary fisheries management.
27. The biological health of the sanctuary is compromised.
28. Goals of sanctuary should be preservation of undisturbed habitats
29. Concerned about SBNMS closing areas; This is a change from the original management plan

Actions / strategies:

1. Initiate discussions about establishing fully protected marine areas within SBNMS boundaries.
2. Create scientifically based network of fully protected no take marine reserves within SBNMS
3. Do not close SBNMS to the fishing community or recreational boaters
4. Keep the seafloor in tact to protect recovering groundfish populations and to protect the seafloor ecosystem and food web
5. Develop no fishing areas within SBNMS
6. Develop process to establish ocean wilderness
7. Perform research to create scientifically based no take marine reserve w/in SBNMS
8. Fully opposed to all closures of public resources to the public
9. Establish no-take marine reserves in the Sanctuary to provide valuable control sites for scientific research and protection for marine biodiversity

10. Create protected area using scientific data (fish spawning, whale feeding, greatest biodiversity) that would be undisturbed by extractive human activity
11. Reserves help preserve biodiversity in large areas and increase fish stocks; SBNMS should close certain areas to fishing to conserve biodiversity
12. Use selective use of closed areas to protect sanctuary as a whole and to help bring back inshore fisheries
13. If commercial fishing not allowed in SBNMS then redraw lines of SBNMS or trade area so fishermen can still work the bank; and SBNMS must work with other regional authorities to keep the area open to fishing
14. No places within SBNMS are protected as "no take"; areas like this should be establishedPart of SBNMS could be used as "laboratory". Should have permanent closed areas not subject to NEFMCSB needs S.P.A.'s similar to FKNMS
15. For the sake of habitat protection there must be "no take" reserves and gear restrictions
16. Establish no take reserves to protect biodiversity, not just for fisheries
17. Use SBNMS as a test area to evaluate species protection / enhancement policies which can be used in other areas
18. Most important ecological and SCR resources need to be protected. Establish fully protected ecological reserves
19. Specific protections need to be developed and maintained to protect natural ecosystem Identify habitats that require especial protection
20. Mimic Canadian model per groundfish management plan and no take conservation areas
21. FKNMS has designated no take areas; CINMS is in the process; this was accomplished through transparent public processes that brought together all stakeholders; SBNMS should pursue a similar goal and use a similar process
22. It is incumbent upon SBNMS to be a leader and pioneer in marine ecosystem management and to fulfill the mandate of the NMSA "to create models of…and ways to conserve and manage these areas including the application of innovative management techniques. (see FKNMS)
23. Create a marine reserve working group to identify appropriate areas for full protection within the Sanctuary as a component of a comprehensive ecosystem management plan.comprised of knowledgeable scientists, resource managers from all relevant state and federal agencies, and the full range of interested and affected stakeholders
24. Implementation of no-take marine reserves should be provided for in this review as a state of the art management technique for Sanctuaries that has emerged since the original management plan.
25. Given the urgent need to protect Sanctuary resources, including promoting the recovery of depleted species and damaged habitats, it is even more important that the Sanctuary implement a process through the management plan review to establish scientifically based no-take marine reserves.
26. SBNMS should use independent process like that of the FKNMS and CINMS to look at need and designation of marine reserves to protect habitat and biodiversity
27. The process to select areas within SBNMS where fishing should be limited or prohibited should consider the full range of habitats, biological communities and ecological processes to implement the NMSA mandate.
28. The Sanctuary should engage with NEFMC and other agencies as a full and active partner in establishing marine reserves in SBNMS, but cannot to defer this action to the jurisdiction of other agencies.
29. Sanctuary should provide procedural model that is currently lacking by articulating the goals for reserves to provide overall ecosystem protection and scientific research sites (supporting the legislated purpose of the NMSA) and establishing an inclusive process to gather information and stakeholder input necessary to identify sites that meet those purposes.
30. Regulations under the NMSA may be necessary to establish no-take reserves within SBNMS; if so, Sanctuary managers should work with the NEFMC to ensure the adequacy of such regulations.
31. This process to develop a no-take reserve should include clear roles for all agencies involved, including assistance with scientific research, socio-economic data collection, resource protection recommendations, stakeholder involvement, monitoring, and enforcement.
32. The lack of understanding of resource trends is a major concern, but the lack of understanding should not prohibit new and innovative approaches to manage SBNMS.
33. SBNMS seafloor habitat conditions are relatively well known, considering the paucity of information on the type, distribution, and condition of seafloor habitats throughout the Gulf of Maine.
34. Areas containing a range of seafloor habitats should be protected from human-related disturbance, including commercial and recreational fishing.

35. No-take zones (e.g., marine protected areas for the purpose of conserving ecological integrity) may be appropriate for areas of SBNMS.
36. SBNMS has an opportunity to provide a scientific control and a relatively unaltered seafloor environment.
37. Establishment of MPAs or other regulations should be experiments that aim to uncover something about how the system operates by way of their degree of success.
38. MPA's should be implemented with a set of quantifiable objectives as well as a series of alternative actions to be taken if those objectives are not met.
39. There should be an accompanying research program to management of MPA that will aim to uncover why objectives were not met if that turns out to be the case. This approach is not only advantageous in its responsiveness and ability to help continually learn about the system, but it can also help achieve stakeholder consensus.
40. Given the urgent need to protect Sanctuary resources, including promoting the recovery of depleted species and damaged habitats, it is even more important that the Sanctuary implement a process through the management plan review to establish scientifically based no-take marine reserves.
41. To fulfill NEPA requirements future management options should include: complete closure / prohibition to commercial fishing activities (gill netting, trawling, lobstering) zoning the sanctuary for particular uses in certain areas establish new marine sanctuaries such as Jeffrey's Ledge
42. The reason this sanctuary was set up was to prevent mining; The sanctuary shouldn't have any restrictions on the way commercial / recreational fishing is done at this time

1.C.2 General ecosystem based management practices:

Concerns:

1. SBNMS must preserve biodiversity and marine mammals
2. Protect the entire system; This needs to be a joint effort with mutual compromises for affected parties
3. Needs to be more shared information between stakeholders that utilize SBNMS
4. Sanctuary talks about ecosystem based management v. single species management. The authority or ability of sanctuary to actually do this needs to be addressed
5. Ecosystem based management is good as it encourages good research. Not used for SBNMS
6. Concern about how ecosystem plan developed and how issues prioritized. Concerns when individual species have management plans that are interchangeable What does ecosystem plan look like? How does management plan account for naturally occurring cyclical events
7. Zoning is a key concept; use in an ecosystem based management approach (holistic approach)
8. Must function using ecosystem based management (not species by species)
9. Past 10 yrs science has increased knowledge of seafloor habitat; Need more concrete protections of benthic habitat and use of ecosystem based management
10. SBNMS should be aware of potential problems created by zoning. Alienate people; Create conflicts between users; Increased enforcement costs
11. DMF is finishing MPA policies with emphasis on resources, gear and bottom habitat. SBNMS will have a copy of these before the scoping deadline of Oct 18.
12. Concerned about GoM in general. Should protect natural stocks so they can continue to be caught. Things are very different now in terms of # and size of fish than with our fore fathers. Other countries use marine reserves as tool for improving fisheries (e.g. New Zealand) No take areas will allow for restoration of natural stocks which move out of the reserve and get caught
13. SB should consider true sanctuaries within its boundary. Marine reserves as subset areas within SB. Concern that whale and fish stocks won't recover due to excess stresses on them. Lets learn from Right whale and passenger pigeon. Commercial fish stocks are dependent on entire system which is why setting aside areas will help protect long term commercial catch2 fishermen on SAC will help provide overview for decision makers
14. The logical role for the Sanctuary is to function as just that with defined areas undisturbed by human activity.
15. The ocean itself and the inhabitants of the SBNMS are not constrained to the boundaries established for the Sanctuary. Air quality, ocean currents, pollutants, and the presence, or absence of, specific types of flora and fauna in the North

Atlantic all impact the health of the SBNMS ecosystem. (Ex. Massachusetts Water Resources Authority's outfall pipe may not enter the Sanctuary, the influx of fresh water and chlorine may have long-term impacts within the SBNMS; proposals to build energy, aquaculture, or mining facilities may be prohibited within the Sanctuary, but their presence in U.S. coastal waters could impact spawning or nursery areas for organisms that are, at least seasonally, residents of the Sanctuary; activities outside the EEZ, such as whaling or military exercises, can ultimately impact the long-term well being of the SBNMS.)

16. An emerging Sanctuary resource management issue is protection of biodiversity. Protecting marine biodiversity is a relatively recent objective, and it can be ambiguous.
17. The diversity and productivity of resources found in Stellwagen Bank National Marine Sanctuary (SBNMS) warrant consideration of an ocean zoning approach to management.
18. All problems of habitat alteration, pollution, aquaculture, exotic species, climate change converge on the species in the ecosystem and effects can be cascading
19. There is a need to shift from conflicting, confusing single species management to wider more comprehensive ecosystem based management approach.
20. Actions taken under an adaptive management approach lack the finality that is often apparent in management regulations. Stakeholders will know that the regulation is not set in stone, but instead will be held up to defined criteria and will be changed if those criteria are not met.
21. SBNMS has an arbitrary boundary and does not really encompass an ecosystem.
22. Its clear from Fisheries council process and most ocean resources law that the concept of ecosystem management is not well understood
23. All activities must be integrated with ecosystem impacts and integration in mind.
24. Need to look at SBNMS in context of regional view and even hemisphere view
25. SBNMS should be southwestern hub for series of sanctuaries in GoM
26. The sanctuary has rarely introduced, tested, evaluated and adapted new methods available to improve the way we manage our broader ecosystem
27. Conservation of biodiversity is the most important thing for SBNMS to focus on
28. Do not manage SBNMS "species – specific" should be managed under the principles of ecosystem based management
29. SBNMS must be treated as a protected area, managed for the conservation of species as well as for the health of the ecosystem as a whole
30. Comprehensive protection of SBNMS requires placing sanctuary in context of larger ecosystem
31. Comprehensive protection of SBNMS requires understanding of large scale life histories of migratory animals

Actions / strategies:

1. Enter into a comprehensive program working with NEFMC, NMFS and full range of fisheries interests to come up with a synopsis of ecological functions that take place within SBNMS and build comprehensive a marine zoning plan
2. Sanctuary should have a vision of how fishing fits into ecosystem based management
3. SBNMS must address the effects of fishing on sanctuary system
4. Must create measurable objectives to show quantitatively measures of success
5. MPA policies will be developed by NEFMC; SBNMS should pay attention to these
6. The sanctuary should investigate the idea of marine zoning. See FKNMS; models from New Zealand and Australia. Possible break down of zones might include:No use; No extraction; No fishing with mobile gear or gear that creates bottom destruction; Research only; Zoning of water column
7. Sanctuary should take leadership role in creating a marine zoning experiment.
8. Work with Fisheries Council to create a model
9. SBNMS should follow the model of National Parks wherein there are no extractive activities. Otherwise calling the Sanctuary a sanctuary is ridiculous. If this is not politically workable at the very minimum there should be conservation zones that cover all habitat types represented in the Sanctuary.
10. For safety issues, need to be careful when zoning to consider issues affecting navigation (sea, wind, weather etc.) Include emergency exceptions?
11. Become a 'biopump' that may help preserve diversity and rebuild fish stocks in adjacent waters.

12. Recognize the implications of 'international waters' and the zoning impact on barges. Also the issues around the shipping industry and navigation with IMO relationship to regulating international traffic.
13. Establish a clear vision to maintain ecological integrity of the sanctuary. What would a healthy ecosystem have for species and species densities? General goals for conservation strategies include1. represent in a system of protected areas all native ecosystem types and seral stages across their natural range of variation; 2. Maintain viable populations of all native species in natural patterns of abundance and distribution; 3. Maintain ecological and evolutionary processes, such as disturbance regimes, hydrological processes, nutrient cycles, and biotic interactions, including predation; 4. Design and manage the system to be responsive to short-term and long-term environmental change and to maintain the evolutionary potential of lineages." (see Noss, 1992)
14. Marine ecosystems have large and important pelagic and migratory components. Despite the advantages of Marine Protected Areas they alone will not protect biodiversity, ecological integrity or goods and services of ocean ecosystems. The Sanctuary management must work with others in the Gulf of Maine and along the entire Atlantic Coast to establish a coherent system of reserves.
15. For a successful management of the sanctuary there must be an adaptive management program for monitoring and managing. Use the Lisbon Principles of ocean governance as a measure to set management objectives by.
16. Sanctuary should be used as 'test bed' for innovative management strategies. develop zoning schemes for within Sanctuary and without in surrounding waters. Included must be no-take zones. Multiple benefits to these zones include protection for breeding, spawning, nursery or feeding habitat, enhanced fish stocks in surrounding waters, maintaining or restoring natural biotic communities.
17. It is critical for the SBNMS to think outside of its boundaries and be proactive in collecting information, reviewing data, and participating in management decisions which may indirectly impact the SBNMS ecosystem.
18. Participation of SBNMS in larger scale management efforts should include, but not be limited to, fishing gear modification workshops, and meetings of the Fisheries Management Council and the International Whaling Commission.
19. Define and describe in detail what the “ecosystem management approach” that will be used by SBNMS and how it will be implemented as stated by staff at a scoping meeting
20. Zoning is a concept applied by DMF in territorial waters of the Commonwealth. This involves a great deal of careful planning and justification and a major investment in at sea enforcement and monitoring. Some of our zoning efforts appear to have been successful but only with special efforts by enforcement to make it work. If the Sanctuary attempts to zone the Bank and nearby environs, it must learn from our experience and temper its enthusiasm for the approach with a large dose of harsh reality.
21. High priority issues such as protection of special locations (e.g., wreck of the Portland) should be the focus of zoning requiring enforcement and monitoring with limited Sanctuary funds.
22. The Sanctuary should better define the term especially as to how and to what extent habitat loss in the Sanctuary affects biodiversity. If biodiversity is reduced, what are the consequences? How is the efficacy of the Sanctuary affected? The impetus for protecting biodiversity is the accelerating rate of species disappearance (extinction) due to habitat loss, pollution, and introduction of exotic species. An issue is why this impetus pertains to activities within Sanctuary boundaries.
23. The Sanctuary is a dynamic oceanographic area with an ecosystem typical of temperate climes having a complex pattern of seasonal changes in productivity. The public and especially the fishing industry requires a good explanation about why the Sanctuary's biodiversity is special enough to warrant possible future closed areas to protect that biodiversity.
24. Ocean zoning may include a range of management measures to protect ecological integrity, fisheries productivity, sensitive and rare habitats and species, and cultural resources.
25. The zoning approach should be flexible in order to adapt to changing resource conditions, such as fluctuating populations of fishery and non-target species that require more or less protection through time, and increased understanding of environmental conditions (e.g., the identification of sensitive and/or rare habitats and species).
26. A thorough assessment of zoning options, such as alignment and regulation, needs to include economic, social, and ecological issues.

27. Current and probable extractive and non-extractive operations should be identified to determine impacts to users of SBNMS resources from potential new management measures.
28. Successful implementation of any management method will require close coordination with other regulatory authorities, including the National Marine Fisheries Service and U.S. Environmental Protection Agency, and environmental enforcement agencies.
29. Effective and stringent enforcement will be needed with any change to existing management in SBNMS, or a zoning approach will be futile.
30. SBNMS should participate and potentially contribute as a stakeholder in research being conducted in the geographic regions adjacent to (e.g., Massachusetts estuaries and watersheds) and encompassing the sanctuary (e.g., the Gulf of Maine).
31. SBNMS should review zoning approaches that have been implemented by other sanctuaries, such as the Florida Keys NMS. The Florida Keys NMS has established a multi-tiered approach to zoning that includes restricted regions for ecological protection and scientific research.
32. NCEAS working group contends that marine reserves (with no extractive activities) can be effective in ecosystem based management
33. Marine reserves are one of the best tools available to manage entire ecosystems
34. Leadership demonstrated by SBNMS in considering this tool will be critical for other regional activities
35. Develop a multi-objective marine protected area (MPA) network. The Management Plan Review and Update identifies spatial management (i.e. marine zoning) as a potential strategy for improving ecosystem protection.
36. MPAs have the potential to achieve a wide variety of objectives through a single management action. These objectives include: habitat protection, segregation of potentially conflicting user groups, establishment of reference areas for monitoring human impacts, and enhancement of exploited populations.
37. SBNMS should strive to implement an MPA network that achieves multiple benefits. (see Kritzer letter for discussion)
38. The current state of scientific knowledge of most marine systems is inadequate to design the optimal management strategies and to comprehensively predict their likely outcomes. The management process should be explicit where the gaps in knowledge are and how these can affect the results of management strategies.
39. Utilize adaptive management approaches. Management actions should not be seen as the endpoint of research but rather as steps in an ongoing research and management process. (see Kritzer letter for discussion)
40. Does SBNMS know how to manage per ecosystem based management?
41. As many of the species that inhabit SBNMS are seasonal or migratory management decisions should utilize global information.
42. The SBNMS MPR offers a timely opportunity to transform SBNMS into a showcase of integrated marine resource management and protection which truly lives up to the most compelling mandate of the NMSA:“to maintain the natural biological communities in the national marine sanctuaries, and to protect, and where appropriate, restore and enhance natural habitats, populations, and ecological processes”

Working Group Name: Compatibility Determination

Issues Addressed:

1.D Need for Compatibility Determinations

Issue Description:

Stellwagen Bank National Marine Sanctuary has legal obligations to manage this marine area in accordance with the National Marine Sanctuaries Act, with the primary objective of resource protection, but also with potentially conflicting obligations of facilitating use and complementing existing regulatory authority. Understanding the implications of human use of the sanctuary is essential to fulfilling mandates. SBNMS must develop a means to mitigate conflict, manage for the health of the ecosystem and determine what a compatible use is and how much of that use is too much.

Background and Regional Context:

Many comments during the 1999 - 2000, and 2003 public scoping meeting expressed significant concern about the purpose of the sanctuary. Comments ranged from "how can you call yourself a sanctuary" to "there should be no regulations or interference with use of the sanctuary." SBNMS was designated in 1992 as "an area of special national significance". Along with that designation came some legal obligations to manage and protect sanctuary resources with the primary objective being resource protection. However, the National Marine Sanctuary Act also states that sanctuary managers have the obligation "to facilitate to the extent compatible with the primary objective of resource protection, all public and private uses of the resources of these marine areas not prohibited pursuant to other authorities;"

Within these mandates lie significant potential for conflict depending on which component of the above statement is emphasized and how terms are defined. Agencies may have cross-jurisdiction authority over the area of SBNMS but may have very different goals and priorities with different preferences for an outcome. For example, the mandate of the Sanctuary to protect biological diversity while allowing compatible uses differs from the emphasis put on maximizing fishery yields by the New England Fishery Management Council. Stakeholders may have interests that could be impacted by sanctuary management choices as reflected in a Tuna Association scoping comment expressing opposition to any restriction on anchoring in the Sanctuary. Conflicts in the law and among sanctuary stakeholders will always exist. However, given the legal mandate to

make determinations about negative impacts on the SBNMS system there must be a mechanism to make balanced and objective assessments as to what is a compatible use. The management plan review process is an appropriate opportunity for the sanctuary and stakeholders to clarify the goals and objectives of the sanctuary as well as to establish a mechanism to determine whether a use is compatible with the primary objective of resource protection.

Existing Regulations:

The National Marine Sanctuaries Act (16 USC 1431 et.seq.) states that among the purposes and policies of the Act is the obligation" to facilitate to the extent compatible with the primary objective of resource protection, all public and private uses of the resources of these marine areas not prohibited pursuant to other authorities;"

The Act also states that among the purposes and policies is the obligation "to provide authority for comprehensive and coordinated conservation and management of these marine areas, and activities affecting them, in a manner which complements existing regulatory authority;"

Who are the Players?

Governmental Agencies (with overlapping or neighboring jurisdictions)

- NOAA Fisheries
- EPA
- ACOE
- U.S. Fish & Wildlife Service
- National Park Service
- New England Fisheries Management Council
- NMFS
- Massachusetts Division of Marine Fisheries
- Massachusetts Water Resources Authority
- MassPort

Stakeholders

- Industry
  - Fishing Commercial:
    - Mobile gear-fish
    - Mobile gear-scallop
    - Fixed gear-fish
    - Fixed gear-lobster
    - Tuna fleet
  - Fishing Recreational:
    - Party charter boats
    - Mosquito fleet
  - Whale Watching
  - Ferry Businesses

Marine Transportation/Shipping
Tourism

Conservation Organizations
- Center for Coastal Studies
- Conservation Law Foundation
- Humane Society of the United States
- Ocean Conservancy
- Environmental Defense
- International Wildlife Coalition
- International Fund for Animal Welfare
- Whale Center of New England
- Manomet Observatory
- National Audubon Association

Academic and Research Entities
- University of Rhode Island
- University of Massachusetts

Working Group Participants:

SBNMS Staff Team Leader: Kate Van Dine
SAC member Chair (1)
Fishing Industry
- Recreational (1)
- Commercial (1)

Conservation (2)
Shipping Industry (1)
Whale Watch Industry (1)
Academic (1)
Legal / Policy Academic (1)
Governmental Agencies (3)
Economist (1)

Technical Advisors:
Technical advisors will provide supporting data to the Sanctuary, and may provide presentations on particular topics directly to the working group.

Anticipated Outcomes and Products:

A conceptual framework for determination of compatible uses in SBNMS will be developed. The framework should include criteria or standards against which a use or degree of use can be compared to judge compatibility. The working group will be guided by consideration of how other agencies such as the U.S. Fish and Wildlife Service and National Park Service make such determinations and by a review of the professional literature on this subject.

The framework should identify Sanctuary resources that are sensitive or at risk and prone to abuse or overuse. The framework should consider whether a use contributes to cumulative impacts on the resources and whether a use complements or interferes with the ability to manage the Sanctuary for its primary objective of resource protection.

This document will identify the important elements of management for SBNMS, including an outline for a long-term strategy for implementing the framework, as well as an articulation of additional data needed to drive the framework, and potential regulations to support the framework.

Proposed Timeline:

At total of five all-day meetings, once a month from September 2003 to January 2004. Additional meetings may be scheduled to deal with specific topics. These meetings might be sub-groups rather than the entire Working Group

Related Public Scoping Comments:

1.D Need for Compatibility Determinations and Carrying Capacities:

Concerns:

1. Had the relative risks assessment of the SBNMS been done, fishing impacts, as well as the long-term impacts on fishers of centuries of lousy management, would both have been dealt with explicitly.
2. The relative risks to the sanctuary have not been assessed and prioritized.
3. Concerned about damage being done to the Sanctuary by human uses; What kinds of monitoring dodoes SBNMS do?
4. Don't have good grasp what people are doing in Sanctuary
5. SBNMS should be regulating extractive activities within SBNMS
6. Currently the Sanctuary is doing too much 'balancing' whereby human activities have too prevalent a role.

Welfare of the marine life must be the higher priority.

7. There are many current activities and uses that are resulting in significant cumulative impacts to the ecological integrity of SBNMS

These activities directly conflict with NOAA SBNMS staff to accomplish the missions of the SBNMS

8. Any and all public uses of SBNMS must be secondary to the primary goals and mission of the SBNMS

That mission is to protect marine biodiversity, ecological integrity, and cultural resources

9. MSA says that conservation is the major purpose and that use must be compatible with that priority.
10. Currently the site functions as a multiple use site. This is not what the NMSA mandates.
11. Sanctuary should be used and benefit everyone; Need sustainable solutions
12. SBNMS should create a vision for the Sanctuary within the tenets of the NMSA
13. Advocate for comprehensive MP; Oceans are resource for everyone; Plan needs to reflect that
14. Make SBNMS more protected and less "multiple use"
15. Sanctuary is not a sanctuary
16. Sanctuary should be protected and kept natural
17. Long term preservation of healthy ecosystem is important for constituents
18. Needs to be recognized that SBNMS is a public resource; SB needs to be one of the ones making this statement; SB is not just for local

users but must be protected for long term and for all

All ocean is a public resource

Public concerns should be paramount (not just stakeholders)

Public should be deciding factor of what a sanctuary is

To date15,000 comments rec'd by SBNMS in support of fully protected areas in SBNMS

Ocean resources do not belong to commercial user (which means primarily extractive user)

19. Clarify what are compatible uses of SBNMS–

What are compatible human uses consistent with goals and missions of SBNMS

Clarify what criteria to use to determine these; how does NOAA determine compatibility?

20. Purpose of NMS program is to protect resources

SBNMS should make decisions based on health of resources first and w/o considering job

Make decisions for the environment

21. Ocean is as valuable resource as are land resources

Tying together land and ocean is good to provide understanding of linkages

So much land is protected and so little ocean

Need to identify areas within SBNMS to deserve more protection

If willing to protect land, we should do so in ocean

22. This either a protected area or it is not / what is obvious is in front of you but no one acts on it.

SBNMS is akin to the Emperors New Clothes

23. User needs should not be granted at the expense of the resources they are exploiting.

24. This is the first time we will have had the opportunity to create a vision for the Sanctuary as the current
25. In designating SBNMS Congress has entrusted NMSP with an extraordinary national treasure
    The waters, submerged lands and all biological life within SBNMS are now public trust resources
    This sanctuary represents one component of our ecological heritage

Implicit to protecting SBNMS then is the responsibility to develop and maintain a high level of public trust and credibility

26. There is a wild west mentality about use of the oceans (e.g. energy industry) to exploit resources not protect

Need to see a public process and public benefit to any private activity

27. Don't want to see SBNMS privatized; Private for profit activities should not be allowed in SBNMS
28. Private uses can be appropriate in SBNMS
29. SBNMS should be regulating extractive activities within SBNMS
30. Issue of compatible uses –

What are compatible human uses consistent with goals and missions of SBNMS

what criteria to use; how does NOAA determine compatibility?

    Clarify these in the development of management options

31. SBNMS manages people and not the resources. SBNMS should develop and implement policies that restrict human activities that interfere with the primary objective.
32. There are many current activities and uses that are resulting in significant cumulative impacts to the ecological integrity of SBNMS

These activities directly conflict with NOAA SBNMS staff to accomplish the missions of the SBNMS

33. Any and all public uses of SBNMS must be secondary to the primary goals and mission of the SBNMS
    That mission is to protect marine biodiversity, ecological integrity, and cultural resources
34. A Sanctuary should look like a sanctuary

There must be some limitations , some difference you encounter when you cross into SBNMS otherwise why do you exist?

35. While the site is designated for human use activities, such activities must constantly be evaluated against the primary purpose of resource protection.
36. There needs to be prohibition of human activities that negatively affect biodiversity
37. Name "Sanctuary" is misleading; Sanctuary is not one; Sanctuary implies preservation, can't do anything
    This sanctuary functions as multi use zone; not per NMSA mandate of compatible use
38. Concerned about sanctuaries ability to protect commercial and non-commercial uses and resources
    when SB leadership in protection was shown - effort disappeared and went no where
    mandate under sanctuary act is to consider compatible uses
39. Existing processes function under framework of multiple use / not appropriate or adequate
40. Sanctuary should be most restrictive with regard to resource protection; note the difference between FKNMS and SBNMS in terms of destructive fishing practices
41. Can you equate the concept of NMS to a national park?; The public should know more about the mission statement.; Comparison to a national forest is more accurate (multiple use rather than compatible use).
42. SBNMS is not a "multi use" area; NMSA does not promote balance; Primary purpose is conservation and uses that are compatible with that are allowed; SBNMS should focus on protection of biodiversity and biological resources
43. The logical role for the Sanctuary is to function as just that with defined areas undisturbed by human
44. Goals and purposes of NMSA are "to facilitate to the extent compatible with the primary objective of resource protection all public and private uses of the resources of these marine areas not prohibited pursuant to other authorities."
45. Resource protection should be the focus of Sanctuary activities.
46. The primary purpose of the NMSA is "to maintain the natural biological communities in the national marine sanctuaries, and to protect, and where appropriate, restore and enhance natural habitats, populations, and ecological processes." 16 U.S.C. §1431(b) (3).
47. The Sanctuary provides important protections from activities such as sand and gravel extraction and oil and gas development, as well as a focus for important research and public education.
    The Sanctuary has not been effective in protecting the living resources, habitats, and waters within its boundaries.
48. In a recent report detailing analysis of existing marine and coastal protected areas in the Gulf of Maine area SBNMS was judged to be less effective in conserving the Gulf's marine species and habitats than fishery closures implemented to

assist the rebuilding of depleted groundfish stocks.. Given that the Sanctuary is obligated under the NMSA to provide protection to the full range of Sanctuary resources, this situation is unacceptable and cannot continue.

49. SBNMS should fully implement its duty to protect resources and manage uses compatible with that mandate, and use the MPR process to assess and revise as necessary the means to achieve this.
50. Since the Sanctuary's designation, it has become clear that the effects of fishing on the Sanctuary's resources have not been adequately addressed to date to meet the mandate of the NMSA.
51. Human uses within the Sanctuary must not interfere with the primary objective.
52. SBNMS mngmnt plan needs to evolve to acknowledge fishing has impacts and need to acknowledge that some uses (e.g. fishing) are not compatible with goals of NMSA

Actions / strategies:

1. Control the number of fishing boats, whale watch boats and pleasure craft
2. Monitor density of human use and user conflicts
3. Shipping, boat speeds, discharge of wastes should all be regulated within SBNMS
4. With radio beacons record all commercial vessels (shipping, whale watch, tour or fishing vessels) that move through the sanctuary waters.
5. Publish these data on the web with summary information about vessel speeds.
6. Evaluate bycatch of seabirds and marine mammals within the site due to fishing activities (past, present, and predicted into the future). Answer the question: is the level of bycatch c sissistent with the primary role of the sanctuary?
6. "State of the Sanctuary" report doesn't describe the actual condition of SBNMS and problems. It is a marketing piece. Also activities from early years are missing
7. Stop mid water trawling for species such as herring
8. Re: habitat issue, SBNMS needs to rank the magnitude of order of affects on seabed
9. Perform more research on bycatch and effects of bycatch in SBNMS
10. Reduce bycatch within SBNMS by making sure all catch is landed and utilized
11. Establish radio station to monitor shipping / tanker traffic coming across SBNMS
12. Quantify / clarify human uses; Identify levels of activity (i.e. harvest levels); Quantify the effects of human use on the ecosystem
13. Identify links between human uses and ecology (e.g. trawling)
14. Identify how / what people think about NMS, how or if appreciate them, who / how uses them?
15. Carrying capacity needs to be considered in terms of attracting more visitors
16. Place more focus on protecting the seabed, groundfish, prey species. Protect gravel habitats
17. Develop thresholds of mortality for populations that regulating agencies need to abide by or SBNMS will enforce
18. Be aggressive with comments on projects that could affect SBNMS
19. Be aware of what is being planned / proposed adjacent to SBNMS
20. Party boats are critical access for non boating public; sanctuary should place more emphasis on their importance
21. Assess whether the quantify boat traffic increasing year to year; Will SBNMS be over trafficked?
22. No restrictions of service vessels transiting SBNMS (tankers, cruise ships, etc)
23. SBNMS should have regulation that ships coming into SBNMS notify USCG to reduce collisions with fishing vessels
25. It should be the responsibility of a user of the Sanctuary to justify that their activity won't adversely affect the resource. For example, require a conservation plan, a monitoring plan and a risk assessment of the activity. Users should pay for their own management
24. A major part of Sanctuary research should be towards creating a safety zone for wildlife. The sanctuary must be managed for other than commercial interests. There needs to be a shift in paradigm to institutionalize management for precaution with marine life and ocean water quality.

25. Assess what new vessels may be using the Sanctuary and how to enforce regulations of those? (e.g., high speed ferry; gambling / dinner cruises; night time excursions)
26. All commercial Fishing vessels must use biodiesel fuel to reduce emissions
27. Options for non-intrusive eco-tourism (beyond the standard, yet popular, whale-watching excursions) should be considered and tested.
28. Compatibility determinations need to be made for the current activities
    Criteria needs to be developed to support management decisions to limit or prohibit an activity or use
    Are current activities (permitted or otherwise) considered compatible with the biodiversity, ecological health and integrity, cultural resource protection goals? If not why not….
29. What are the cumulative impacts to the natural resources and to the mission/ purpose for which SBNMS was established
30. The natural, unaltered environment offers many opportunities for comparing environmental characteristics found in other areas throughout the Gulf of Maine that are continuously impacted by human influences and demonstrating the diversity and productivity of SBNMS resources.
31. Clarify definition of conservation; wise use of resource v. preservation which is no use
32. To assure best successes in maintaining a healthy system then management must operate in a risk-adverse manner, in face of scientific uncertainty, errors must be made on the side of environmental protection.
33. Users must be the ones who show they are not creating an adverse impact before they can engage in their activity.
34. Sanctuary should have a vision of how fishing fits into ecosystem based management
35. Create long term goals for SBNMS
36. Determine what is “appropriate use” of the Sanctuary; The only “right” use belongs to its natural inhabitants otherwise it is not a Sanctuary
37. Identify compatibility standards for allowed uses of SBNMS
38. Strengthen the existing management plan to ensure it achieves its primary purpose to protect SBNMS
39. The sanctuary belongs to all of us not just commercial interests and sanctuary management needs to recognize its responsibility for that
40. Balance the public costs versus private benefits of any action in SBNMS
41. Management decisions should be based on the ecosystem, not on fisheries or species specific issues.
42. The revised management plan should revise the protocol for issuing special permits for projects such as laying fiber optic cable beneath the seabed, which occurred in SBNMS in 2001.
43. Commercial or private access to the Sanctuary should not be allowed until a clear protocol is established for the issuance of such permits so that Sanctuary resources and activities are not put at risk, and the NMSA’s mandate that permitted activities should be compatible with the primary goal of resource protection is upheld
44. Any special permits should be carefully evaluated to identify potential adverse effects on Sanctuary resources. Such evaluations should use a precautionary approach and assess cumulative impacts over time and incorporate other activities occurring in and adjacent to the SBNMS.
45. Applicants for special use permits should be required to identify and characterize the types, levels and probabilities of potential impacts, and possible mitigating measures and appropriate research and monitoring plans should also be developed.
46. Depending on the nature of a project, options for restoring impacted Sanctuary resources after the project’s life should be identified and evaluated, including possible removal of any infrastructure or equipment and actions to restore affected habitats.
47. Mechanisms and timelines for the Sanctuary’s receipt of appropriate revenues, or financial or other compensation must be developed, and bonds against potential damages posted by the applicant where appropriate.
48. The protocol to provide special use permits should include adequate opportunities for public review and input. Applications under consideration should be published in the Federal Register and subject to public hearings and comment.
    Any appeals process should be subject to adequate public review.
49. Clarify whether privatization would require amending designation document?
50. No future dredging on seafloor

51. Honor the Sanctuary's mission of conserving protecting and enhancing biodiversity, ecological integrity and cultural legacy by adopting strict new protective regulations
52. Strong new management measures must be implemented to better clarify sanctuaries role in preserving habitat, restoring declining fish stocks, and protecting endangered species.
53. Typically we wait too long before we regulate and we need not wait if there appears to be a problem, we should act on best available information and be conservative in our actions in favor of conservation
54. SBNMS should provide greater protection for living marine resources, both within and outside of the sanctuary boundaries.
55. Reason for SBNMS under NMSA is to protect resources and allow uses that are compatible with that purpose
    Sanctuary should look at current uses and revise MP
    Sanctuary should consider no take zones in protecting sanctuary resources
56. Clarify what is a compatible use within SBNMS
57. Public and private uses of Sanctuary resources must be "facilitat[ed] to the extent compatible with the primary objective of resource protection." 16 U.S.C. §1431(b) (6) (emphasis added).
    The revised management plan for SBNMS should clearly advance these purposes and policies of the NMSA.
58. Regarding ecosystem, if there are any proposals to be made, the commercial organizations listed here in the comments should be involved in a working group with environmental groups and NMFS
59. For MPR process, make sure all stakeholders are at the table
60. SBNMS resources are public, involve all stakeholders in MPR process
61. Have a workshop with SAC, staff and fishermen to get ideas on management options
    (maybe meet with commercial and recreational fishermen separately)
    NB; Ptown; Sci; Glou
62. Challenge stakeholders to develop creative solutions to management activities
63. The revised management plan must address: the intensified use of Sanctuary resources, reflect the improved state of knowledge, provide for more effective protection of resources provide for the recovery of depleted and damaged resources, and ensure the Sanctuary does a better job of fulfilling its mandate.
64. Should MPR recommendations be deemed to require modification to the "terms of designation" of the Sanctuary (which may require additional procedural steps as provided by the NMSA), the Sanctuary should immediately initiate all appropriate steps to modify the regulations as needed.
65. Public and private uses of Sanctuary resources must be "facilitat[ed] to the extent compatible with the primary objective of resource protection." 16 U.S.C. §1431(b) (6) (emphasis added).
    The revised management plan for SBNMS should clearly advance these purposes and policies of the NMSA.
66. The revised management plan should revise the protocol for issuing special permits for projects such as laying fiber optic cable beneath the seabed, which occurred in SBNMS in 2001.
67. The SBNMS Management Plan should include a careful evaluation and assessment of activities that have occurred since the original designation of the Sanctuary in 1992.
68. Compatibility determinations need to be made for the current activities
    Criteria needs to be developed to support management decisions to limit or prohibit an activity or use
    Are current activities (permitted or otherwise) considered compatible with the biodiversity, ecological health and integrity, cultural resource protection goals? If not why not….
69. Should any of these recommendations be deemed to require modification to the "terms of designation" of the Sanctuary (which may require additional procedural steps as provided by the NMSA), the Sanctuary should immediately initiate all appropriate steps to modify the regulations as needed.

Working Group Name: Vessel Strikes on Marine Mammals

Issue Addressed:

2.B Vessel Strikes / Impacts on Marine Mammals

Issue Description:

Collisions between large whales and vessels can cause injury or mortality to whales and humans, and damage to vessels. On a global basis, such collisions are increasing in frequency. This increase is most often attributed to a rise in vessel traffic and the size and speed of vessels transiting areas. Fin whales are the species most frequently involved with collisions, while strikes to right, humpback, sperm and gray whales are considered common. At the population level, right whales are the most severely impacted.

All types and sizes of vessels have been involved in collisions, but ships >80 m in length are responsible for most mortality. In terms of frequency, Coast Guard or Navy ships and whale-watching boats have the most reported collisions, although this might be affected by reporting bias. Tanker/cargo ships and ferries were also frequent interactors.

The chance of collisions occurring depends on a variety of factors including ship dimensions, number and behavior of whales in association with shipping, the escape capabilities of the whale(s), the avoidance capability of the vessel, and the water depth in which the interaction between whale and ship takes place. Mitigations could be designed to reduce the frequency or severity of collisions. Possible measures include rerouting vessels to avoid high use whale areas, vessel speed restrictions, the development of technologies that might warn whales or captains of impending collisions and facilitate avoidance (e.g. forward facing sonar), and increased awareness and vigilance on the part of mariners.

Background and Regional Context:

The SBNMS is one of the highest use habitats for baleen whales along the eastern seaboard of the United States. Commercial vessels accessing the port of Boston or using the Cape Cod Canal also heavily use the area. At a finer scale, the traffic separation zone for commercial shipping entering or leaving the port of Boston via the Great South Channel crosses the southern portion of the SBNMS, an area that consistently exhibits some of the highest baleen whale densities in the Sanctuary. Commercial shipping coming from points east and north typically cross the

northern portion of Stellwagen Bank or Jeffreys Ledge; also area where baleen whales aggregate in large concentrations.

Additionally, the SBNMS hosts a large and active commercial whale watching fleet; a vessel type with a documented history of vessel collisions, many of which have occurred in waters within or adjacent to the Sanctuary. Numerous recreational vessels and tuna "stick boats" that target or operate around whales, often at high speeds, also use the SBNMS. The presence of animals in the SBNMS with short-revolution (i.e., closely spaced) propeller wounds or scars, or wounds accompanied by bottom paint indicate that such small vessels represent a potential hazard to whales.

Existing Regulations:

It is illegal to approach a right whale within 500 yards. Vessels finding themselves within 500 yards of a right whale must depart the area at a safe, slow speed. All commercial vessels of 300 gross tons or greater using the port of Boston are required to report their location, course, speed, and destination when entering the Mandatory Ship Reporting (MSR) zones, of which the Sanctuary is a subset. There are no regulations to protect species other than right whales from collisions. Relevant national legislative Acts include the Endangered Species Act (right, humpback, and fin whales), the Marine Mammal Protection Act (right, humpback, fin, sei, and minke whales), and the National Marine Sanctuaries Act. Internationally, the Laws of the Seas Convention and the International Maritime Organization would be applicable.

Voluntary Actions

The NOAA Fisheries and other groups conduct surveys for right whales to document their location as part of the NOAA Right Whale Advisory System. These locations are broadcast by NOAA weather radio of faxed directly to vessels to alert mariners to the presence of right whales. Information is accompanied by a request that "mariners keep a sharp lookout and use caution around right whales." Commercial whale watching vessels operate under guidelines that reduce vessel speeds to 13 knots beginning two miles from a sighted whale, with additional speed decreases and other actions as vessel approach animals[1]. Working with the SBNMS, the International Wildlife Coalition (IWC) has initiated a "See a Spout—Watch Out!" campaign designed to make recreational boaters aware of the proper ways to handle boats around whales. The IWC also conducted an on-water education campaign in 1994 and 1995.

[1] For additional guidelines see Whale Watching Guidelines: Northeast Region, including the Stellwagen Bank National Marine Sanctuary published by NOAA.

Who are the Players?

Players are defined as agencies or institutions that are involved in regional management and enforcement, the major groups or industries that use Sanctuary resources, and other interested groups or organizations.

Government Agencies (Management and Enforcement)

- NOAA Fisheries
- NMFS
- United States Navy
- United States Coast Guard
- National Marine Sanctuaries Program
- International Maritime Organization

Industries

- MassPort
- Boston Pilots Association
- State Economic Development Groups
- Mass Department of Tourism
- Commercial Whale Watching
- Shipping Companies

Conservation Organizations

- Center for Coastal Studies
- Conservation Law Foundation
- Environmental Defense
- International Fund for Animal Welfare
- International Wildlife Coalition
- New England Aquarium
- Ocean Conservancy
- The Humane Society of the United States
- Whale Canter of New England

Research Universities

- University of Rhode Island
- University of New Hampshire
- Massachusetts Institute of Technology

Working Group Participants:

SBNMS Team Leader: Dave Wiley
SAC Member Chair (1)
Shipping Industry (3)
Conservation (4)
NOAA Fisheries (2)
Science (2)
Recreational boating (1)
Tuna Association (1)
Charter Boats (includes whale watching) (2)

Technical Advisors:
Technical advisors will provide supporting data to the Sanctuary, and may provide presentations on particular topics directly to the working group.

Anticipated Outcomes and Products:

An action plan to understand and address the issue of ship strikes to marine mammals within the SBNMS will be developed. The action plan would include short-term and long-term strategies involving potential management measures and address additional data needs.

Proposed Timeline:

A total of five all-day meetings, once a month from September 2003 to January 2004. Additional meetings might be scheduled to deal with specific topics. These meetings could involve a subgroup of the Working Group

Related Public Scoping Comments

2.B Vessel strikes / impacts on marine mammals:

Concerns:

1. The "unseen whale" issue must be looked at in order to avoid ship strikes of marine mammals
2. Tuna industry is strongly opposed to any restriction on vessel speed in SBNMS
3. Concerned about impact of shipping lanes on right whales
4. Tuna fishermen often target areas where marine life, including whales, is present. These fishermen often transit close to whales with little regard for them, and several observers have seen numerous close calls.
5. Recreational vessels also often transit through high use whale areas with little regard to collision risk, and there are numerous humpback and fin whales that bear scars from collisions with boats where scars are indicative of smaller propellers turning at high speed.
6. Impacts to the resources (whale strikes) have come from both the big vessels (though undocumented but assumed through necropsies) and whale watch boats.
7. SBNMS is part of a bigger picture. By altering the means and method of vessel traffic through the Sanctuary, impact will occur on other users or in other's jurisdictions.
8. Opposed to high speed boats in SBNMS. Must move fast on this as more high speed vessels are being purchased
9. Speed limit won't be enforceable
10. High speed vessels lead to possible collisions with other vessels
11. Conditions are fluid within ocean envt – resources move from place to place within SBNMS
    Concerned about speed restrictions throughout sanctuary relative to maritime commerce and shipping
    However, WW industry should take on additional burden if speed restrictions as written in guidelines

Actions / strategies:

1. Regulations are required to protect whales from private and commercial vessels, to provide safe speed zones in high use areas,
2. Create safe viewing distances,
3. Limit the number of vessels in proximity to whales
4. Limit vessel speed in the sanctuary to at least below 20knots for all vessels
5. Decrease speed of boats in SBNMS for all classes of boats to protect marmam
6. Whale watching vessels should all be equipped with prop guards
7. Reduce boat traffic in SBNMS to protect whales
8. Create mandatory ship reporting for vessels entering SBNMS to provide boaters with info on marmam species present in the area and how to behave around them
9. There needs to be a monitoring system to prevent ship strikes of marine mammals from all vessels
10. Prohibit to high speed vessels in SBNMS
11. Opposed to high speed boats in SBNMS. Must move fast on this as more high speed vessels are being purchased
12. Whales can hear small boats – the superclass boats kill whales – slow them down
13. For the sake of resource and habitat protection there must be speed limits to avoid affects on whales
    Speeding boats are an issue
14. No high speed ferries in Sanctuary
15. Re route shipping lanes to avoid ship strikes
16. Re route shipping lanes to avoid ship strikes
17. For shipping lanes – underwater sound buoys so whales don't enter lanes? Coordinate with Office of Naval Research
18. Create a vessel mounted deterrence system
19. Need to address shipping impacts on right whales; Believe fishing industry is falsely blamed for right whale deaths, when it is actually shipping
20. Eliminate shipstrikes through narrowing shipping channels and create a functional tracking system of whales in that channel. Evaluate new tracking or sounding technology (passive sonar, modified ship design).
21. Look at the possible vessel modifications that might help avoid strike or prevent injury from a strike.

Use the National Academy of Science as a source of information for practical, technical solutions.

22. Assessing any issue around marine mammals must incorporate the 'Precautionary Principle' (see Lisbon Principles). There needs to be a shift in the paradigm of how and for what purpose are vessels interacting with marine mammals being managed. The starting line must now be the conduct of the vessel within proximity to a marine mammal; the necessity to avoid collision; and what and when is a behavioural interference.
    a. How do we minimize risk of collision?
    b. What are the cumulative effects of vessel activity on marine mammals.
    c. When is there a behavioural disturbance?
    d. What role does acoustics (engine noise, etc.) play in that?
    e. When is there too much vessel activity?
    f. Sanctuary management should consider having parts of the Bank off limits.
    (e.g., timed area closures; permanently closed areas)
    g. Sanctuary management should consider a dynamic management system that protects the animals as they move with their prey.
    h. Sanctuary management should consider temporal restrictions; no night whale watching
    (e.g., dusk/evening is feeding time, boat activity should be minimized).
23. No fishing while whales are in the area.
24. The results of the review on whale distribution in SBNMS should be used to guide actions that are likely to benefit whales rather than placing such restrictions over a wide area with little regard to the extensive information that is available.
25. Any vessel operator within the Sanctuary should be required to go through training that will teach themhow to properly operate their vessel around whales, and to understand something about the behavior and biology of the whales they are approaching.
26. Partner with NMFS for joint support; sharing lessons-learned and jointly exploring statutory authorities and outreach may offer new opportunities to protect endangered right whales.
27. The main questions regarding management to mitigate shipstrikes of marine mammals are in the administration and enforcement. Management actions must address the following:
    Large vessels operate under international rules -
    a. How will Sanctuary rules be enforced and administered?
    b. Will any proposed rules or regulations alter traffic into other areas that are not currently being used by such vessels?
    c. Will this alteration cause gear and other types of conflicts among the ocean users?
    d. Will any regulation have an effect on port economies of the region?
28. If the Sanctuary managers propose a change, the managers must work with all entities in the region for a "bigger picture solution" to achieve their aims rather than push the problems on neighbors and their resources and uses.
29. Any speed regs should apply to all boats (not just ww vessels) No single entity should be isolated
30. Cooperating with the users of the sanctuary is the best way to meet some enforcement needs.
31. Designated shipping lanes should remain in place; No need to establish speed restrictions there

Working Group Name: Behavioral Disturbance of Marine Mammals

Issues Addressed:

2.C Whale Harassment and Behavioral Disturbance

Issue Description:

The issue of anthropogenic disturbance of marine mammals is gaining worldwide attention. In the United States, the Marine Mammal Protection Act (MMPA) makes it illegal to harass marine mammals. Harassment is defined as: "any act of pursuit, torment, or annoyance which – (1) has the potential to injure a marine mammal or marine mammal stock in the wild, (Level A Harassment), or (2) has the potential to disturb a marine mammal or marine mammal stock in the wild by causing disruption of behavioral patterns, including, but not limited to, migration, breathing, nursing, breeding, feeding, or shelter (Level B Harassment)." There are two broad ways in which marine mammal might be disturbed; though physical approach that violates an animal's "individual space" requirements or through the introduction of noise into the environment that exceeds a physiological or utilitarian threshold.

Approach Disturbance

Most species of wildlife have an approach threshold within which they become increasingly intolerant of human activity. Reactions within the tolerance gradient range from increased vigilance with accompanying behavioral changes to flight or attack response. This threshold varies by species and individual. Increased individual exposure can cause a decrease in the tolerance threshold leading to abandonment of an area or result in increased tolerance through habituation. At some point, close approach increases the chance of injury to the animal being viewed and/or the person attempting viewing. Approach disturbance would be most chronic from commercial and recreational whale watch vessels, although any vessel moving through the Sanctuary could potentially cause at least a temporary approach disturbance.

Noise Disturbance

In aquatic environments, sound is transmitted more efficiently than light. Therefore it is not surprising that many marine mammal species evolved a heavy dependence on sound as a means of gathering environmental information and make extensive use of sound in their daily lives. In the 1970's, concerns began to surface over the impact of anthropogenic noise on marine

mammals and those concerns have increased over time. The potential negative impacts of excess noise are varied. Noise might impair animals by making them unable to detect biologically important sounds (e.g., communication sounds or sounds that indicate the presence of prey), a process known as masking. At higher levels, noise might temporarily disrupt behaviors such as resting or feeding, or animals might temporarily or permanently abandon particularly noisy areas. Strong sounds can also cause physiological harm such as temporary or permanent hearing loss or threshold shifts. Noise levels that cause physiological damage can be below those causing animals to actively avoid or move away from a sound source. This might be particularly true in biologically important areas (e.g., feeding habitats). Chronic exposure to moderately high sound levels can cause permanent hearing loss.

Background and Regional Context

Approach Disturbance

The SBNMS constitutes one of the highest use cetacean habitats along the eastern seaboard of the United States. A key impetus for the establishment the SBNMS was the annual return of large numbers of baleen whales to its waters. Another key feature was the area's proximity to human population centers and the desire of those people to view whales. The nexus of these factors resulted in the establishment of a large commercial whale watching industry that, in turn, led to the growth of a substantial recreational whale watching fleet.

Accompanying the growth of commercial and recreational whale watching has been increased concern over the impact of these activities. The desire to protect whales from harm has been shared by both critics and proponents of whale watching, and voluntary industry guidelines, historically focusing on approach distances, have been in place since the 1980's. However, the appropriateness of the guidelines and the degree to which they are adhered is an ongoing debate. The relationship between recreational whale watchers and the voluntary guidelines is also unclear. As a result, NOAA Fisheries has been examining the need for whale watching regulation and many public comments received by the SBNMS focused on the need to "reign in" whale watching. Concerns were also voiced about the potential proliferation of personal watercraft. Alternatively, many comments focused on the value of whale watching as an educational platform or as "sanctuary monitors" (i.e., can notify Sanctuary of entanglements, collisions, harassment, etc.).

Noise disturbance

In the area of the SBNMS, vessels are the prime contributors of anthropogenic noise. The potential for noise disturbance depends on the ambient background noise level, the type and number of vessels using the area, the sound signature of a particular vessel, the distance between the vessel and marine mammal(s), and the hearing abilities and needs of the marine mammal(s). The local physical oceanography, bottom contour and substrate type would also effect sound transmission and attenuation.

There are a variety of vessel classes using the SBNMS, with each having different characteristics and potential for impact. Commercial shipping (e.g., bulk carriers and container ships) probably has the loudest sound sources and lowest frequencies. These vessels transit the Sanctuary year round on a frequent, but intermittent basis. Commercial whale watching vessels emit lower sound source levels at higher frequencies than commercial shipping. Therefore, sound from these vessels would attenuate more rapidly than that from commercial shipping and frequency ranges might have less functional overlap with those used by baleen whales. However, the tendency of these vessel to target and approach whales could contribute to noise on a more localized level. Recreational boats and trawling by commercial fishing vessels would also contribute to noise levels within the SBNMS. In general, speed is a contributing factor to noise, with faster speeds producing louder sound.

Existing Regulations

There are currently no regulations governing noise, although voluntary speed reductions contained in current whale watching guidelines could provide some reduction in sound generation. Relevant Acts include the National Marine Sanctuaries Act, the Marine Mammal Protection Act, the Endangered Species Act, the Law of the Seas, and the International Maritime Organization.

Who are the Players?

Players are defined here as agencies or institutions that are involved in regional management and enforcement, the major groups or industries that use the Sanctuary, and other interested organizations or institutions.

Government Agencies (Management and Enforcement)

- Environmental Protection Agency
- International Maritime Organization
- New England Fisheries Management Council
- NMFS

United States Coast Guard
MassPort

Industries

Commercial Whale watching
Marine Transportation and Shipping
Mobile Fishing
Recreational Boating
Tuna Fishing

Conservation Organizations

Center for Coastal Studies
Conservation Law Foundation
Environmental Defense
International Fund for Animal Welfare
International Wildlife Coalition
The Humane Society of the United States
Whale Center of New England

Research Groups

Massachusetts Institute of Technology
University of Connecticut
University of Rhode Island
Woods Hole Oceanographic Institution

Working Group Participants:

SBNMS Staff Team Leader: David Wiley
SAC Member Chair (1)
Commercial Shipping Industry (1)
Commercial Whale Watching (1)
Conservation (2)
Recreational Boating (1)
Tuna Fishery (1)
NMFS: Regional Office, NE Science Center (2)
Academic (2)

Technical Advisors:
Technical advisors will provide supporting data to the Sanctuary, and may provide presentations on particular topics directly to the working group.

Anticipated Outcomes and Products:

An Action Plan will be developed to understand and address the issue of behavioral disturbance. The action plan would include short-term and long-term strategies involving potential management measures and additional data needs.

Proposed Timeline:

A total of five all-day meetings, once a month from September 2003 to January 2004. Additional meetings might be scheduled to deal with specific topics. These meetings could involve a subgroup of the Working Group. January: Report and recommendations.

Related Public Scoping Comments

2.C Whale Harrassment and Behavioural Disturbance:

1. There needs to be a better definition of marine mammal harassment; current definition is unenforceable

2.C.1 Whale watching activity:

Concerns:

1. Whale watching is meant to be a non-consumptive use of the Sanctuary. However, recent shipstrikes, increased noise levels from increased boat traffic, and issues of approach to the animals may be creating increased pressures on Marine mammals. Sanctuary management should establish strong clear enforceablerules governing WW.
2. The whale watching industry could increase to a point where it overruns the resource.
3. There are too many vessels (commercial and private) to depend on voluntary compliance with whale watching guidelines.
4. There is no regulation nor guidelines nor enforcement where private recreational boaters are concerned. This can be a significant issue in years where whales are plentiful and many private boats are shadowing the whale watch fleet.
5. Personal watercraft including, but not limited to, kayaks and jet skis, are improper equipment for whale watching within the Sanctuary

Actions / strategies:

1. Better regulate whale watching
2. Provide outreach to all boaters regarding guidelines and whale watching protocols; There needs to be training of public boaters on the bank regarding interacting with whales
3. Enforce existing WW guidelines to limit adverse impacts from humans
4. Levy a user fee on whale watching boats to increase resources available to SBNMS
5. Captains should have to receive an endorsement from the Coast Guard or the sanctuary to run whale watch boats.
6. Develop a naturalist certification program and provide them with tools to help impart the message
7. The sanctuary could certify companies that have both trained captains and naturalists
8. Develop a permitting system so that no more boats are allowed to be watching whales.
9. There needs to be a better definition of marine mammal harassment; current definition is unenforceable
10. No need to formalize WW guidelines or to establish WW permitting process
11. Conditions are fluid within ocean envt – resources move from place to place within SBNMS
    Concerned about speed restrictions throughout sanctuary relative to maritime commerce and shipping
    However, WW industry should take on additional burden if speed restrictions as written in guidelines
12. Whale watch guidelines too strong in 2 mile limit to slow down; need to be reviewed
    Review difference between guidelines and proposed regs
13. Certify whale watching boats so they can get closer to whales than other vessels
14. Don't allow any special certification for whale watch boats
15. Minimize boats on whales
    Recreational boaters tend to do what they want with little communication and no repercussions
16. License to operate WW vessel in SBNMS should be required
17. No new WW regs for SBNMS
18. If WW regs promulgated, they must address acoustics
19. Increase education efforts on PWC in SBNMS re: speed and reporting
20. Leave ww boats alone because they serve as "sanctuary monitors" i.e. notify of collisions, accident, entanglement
21. Whale watchers should be educated on how to approach whales safely
    This includes speed, manner of approach, how to detect whales
22. Only boats trained and permitted should be allowed to approach whales to 100 feet; Others need to stay further away;
    Permitted boats need a visible mark (e.g. display flag) to id them as permitted
23. WW regulations should apply to all
24. Limit commercial vessels around whales

25. Evaluate the impact of sound of commercial vessels on whales
26. Identify a carrying capacity to mitigate human induced effects on whales
27. Education on whale watching boats in SBNMS (good naturalist training; broad based information; talk of marmam in context of ecosystem)
28. Charge WW industry a per person fee and use money to provide boats with educational material on ecosystem of SBNMS and correct info on marine mammals and human interaction including information on biodiversity
29. In addition to charging whale boats a fee, charge recreational boats a fee. This will reduce number of boats This will bring in resources for educational and outreach programs
30. Develop certification from sanctuary for whale watch operations to assure standardization of information
31. Whale watching is an important means by which to educate the public about the sanctuary and thereby enhance protection efforts. An increased educational effort is required to inform the public about whale habitat and conservation measures relative to protecting these animals.
32. Should it be the responsibility of any ship using the Sanctuary to justify that their activity won't adversely affect the resource. In the case of WW vessels they might volunteer to fund studies on impact of their industry.Or license the WW boats using the Sanctuary and include in the licensing process a protocol which will minimize risk to the animal. This license could create a presumption in favor of the WW boat should therebe an enforcement action against them.
33. Education of recreational boaters is essential but also needed is the fear factor of enforcement.
34. Cameras on WW boats etc. are effective enforcement tools.
35. Adopt a policy that prohibits personal watercraft for whale watching including kayaks, and jet skis
36. Only permitted vessel operators would be allowed to approach within 500 yards of whales for the purposes of whale watching.
37. Partner with NMFS for joint support for additional studies to investigate the effects of whale watching activities on whales may help address comments received during the first scoping exercise on whether densitiesand proximity of whale watching vessels interfere with whale feeding activity.

2.C.2 Fishing Activity:

Concerns:

1. Large midwater trawlers are competing with marmam for food and they fish in close proximity to marmam
2. Tuna fishermen often target areas where marine life, including whales, is present. These fishermen often transit close to whales with little regard for them, and several observers have seen numerous close calls.

Actions / strategies:

1. Fishing for herring should be outlawed.

2.C.3 Overflight harassment:

Concerns:

Actions / strategies:

1. Do not regulate flight level of planes over SBNMS
2. No restrictions on low flying aircraft (these are usually spotter planes)

2.E Impacts of Vessel Noise and Other Acoustics on Marine Mammals:

Concerns:

1. Navy sonar is potentially devastating to marine mammals
2. Protecting marine mammals in SBNMS includes protecting them from noise pollution
3. Marine mammals are acutely acoustically sensitive
4. There have been conclusive links between sonar activity and deaths and strandings of marine mammals
5. There has been evidence of significant disruption of communication, migration, breeding and other marine

mammal behaviors

6. There are many unanswered questions and concerns regarding human induced noise into the ocean and impacts on marine life

7. Research and management of noise pollution effects on marine mammals is essential particularly with the LFAS the navy has been granted an exemption from the MMPA by NMFS to "take" marine mammals during testing of LFAS

8. Issue of boat speed and noise – are there too many boats too loud for marine mammals?

Actions / strategies:

1. Monitor human activities that generate acoustics and vessel noise
2. Assess impact is of vessel noise on animals and provide an incentive for quieter, non polluting boats
3. Get research papers on industrial sound impacts and signatures (re: Outfall pipe development; big dig; some related to boats, not the outfall)
4. If WW regs promulgated, they must address acoustics
5. SBNMS should issue official comment on any USN acoustics testing within the Sanctuary
6. Prohibit low frequency sonar within SBNMS
7. SBNMS must assess noise levels and impacts on wildlife
8. Concerned about effect of noise on marine life in general
   Has there been any monitoring to know levels of noise pollution
9. Avoid the use of equipment that causes sound pollution disturbing to the wildlife in the Sanctuary.
10. Partner with NMFS for joint support for research to characterize the type of noise and levels in the Sanctuary.

Working Group Name: Marine Mammal Entanglement

Issues Addressed:

2.D Entanglement of Whales and Other Marine Mammals in Fishing Gear and Marine Debris

Issue Description:

Marine mammal entanglement in fishing gear is a global problem that impacts many species. The immediate effects of entanglement include mortality, serious injury, minor injury, or no injury. Long-term effects include deteriorating health, decreased reproductive ability or no impact. The deleterious effects of entanglement occur most frequently at the level of the individual. In cases where populations are small or the rate of entanglement is high, entire species might be negatively impacted.

In the area encompassed by the SBNMS, a number of marine mammal species are reported to interact with a variety of fisheries. These include baleen whales and trap (e.g., lobster, crab and hagfish) or gillnet fisheries, small cetaceans (e.g., harbor porpoise or white-sided dolphin) and gillnet fisheries, and pinnipeds (e.g., harbor seals) and gillnet and trap fisheries.

The proximate causes of marine mammal entanglement are not well studied or understood. However, the ultimate cause is likely the co-occurrence of marine mammals and fishing gear capable of entangling them. This gear could be in the process of being actively fished or derelict. For large whales, an understanding of the cause of entanglement and possible mitigating actions is complicated by the fact that the site of entanglement is not necessarily the location at which an entangled animal is sighted. Large whales can carry fishing gear for many months and travel thousands of miles in the process. This issue is particularly germane to the SBNMS, where a large and active commercial whale watching industry can report entanglements that might have occurred elsewhere. Similarly, whales entangled in the SBNMS might leave the area before they are reported.

Background and Regional Context:

The SBNMS is heavily populated by marine mammals and fishing gears capable of entangling them. Relative to other areas entanglement reports are frequent, which could reflect an increased rate of entanglement or increased observer effort. There is frequent co-occurrence between various marine mammal species and types of fishing gears; however, such co-occurrence varies

on a spatial and temporal basis. An experienced dis-entanglement program operated by the Center for Coastal Studies has had numerous successes in removing fishing gear from entangled large whales spotted in the SBNMS. Public scoping comments indicated that marine mammal entanglement in the SBNMS is seen as a serious issue that needs mitigation, that fishermen should be involved in any process seeking to mitigate the problem, and that fishermen are concerned over any mitigations that restrict fishing.

Existing Regulations:

- National Marine Sanctuaries Act
- Endangered Species Act
- Marine Mammal Protection Act
- NEFMC Regulations – including WGOMCA, rolling closures, acoustic deterrents, days-at-sea, etc.

Who are the Players?

Players are defined as agencies or institutions that are involved in regional management and enforcement, the major groups or industries that use Sanctuary resources, and other interested groups or organizations.

Government Agencies (Management and Enforcement)

NOAA Fisheries (including Take Reduction Team)
New England Fisheries Management Council
MA Division of Marine Fisheries
United States Coast Guard
MA Environmental Police

Industries

Commercial Whale Watching
Commercial Fisheries
Trap Fisheries
Lobster
Crab

Hagfish
Gillnet
Longline

Conservation Organizations

Conservation Law Foundation
Ocean Conservancy
Environmental Defense
The Humane Society of the United States
International Fund for Animal Welfare
International Wildlife Coalition
Center for Coastal Studies
Whale Center of New England

Research Universities

University of Rhode Island
University of New Hampshire

Working Group Participants:

SBNMS Team Leader: Dave Wiley
SAC Member Chair (1)
Commercial Whale Watching (1)
Fixed Gear Fisheries
Trap (2)
Gillnet (2)
Longline (1)
Conservation (4)
MADMF (1)
NMFS (2)
NEFMC (1)
Academics (2)

Technical Advisors:

Technical advisors will provide supporting data to the Sanctuary, and may provide presentations on particular topics directly to the working group.

Anticipated Outcomes:

An action plan will be developed to understand and address the issue of marine mammal entanglement within the SBNMS. The action plan would include short-term and long-term strategies involving potential management measures and address additional data needs.

Proposed Timeline:

A total of five full-day meetings, once a month from September 2003 to January 2004. Additional meetings might be scheduled to deal with specific topics. These meetings could involve a subgroup of the Working Group.

Related Public Scoping Comments

2.D Entanglement of Whales and Other Marine Mammals in Fishing Gear and Marine Debris

Concerns:

1. CCBay (critical Eg habitat) next to SBNMS (MPA) , fishermen re afraid of too much ocean off limits for a wide range of issues.
2. Fishermen want to be part of any process
3. Concerned about effect of fixed fishing gear impacts on right whales
4. Never seen a whale entanglement in 12 years fishing on SB
5. NMFS has established Take Reduction Teams (TRT) to develop TRPs and the NEFSC Protected Resources Branch scientists support this endeavor. We will be glad to share the products from this work with the SBNMS staff in support of their resource protection mission.

Actions / strategies:

1. Assess entanglement of whales with fishing gear within SBNMS and work to mitigate this.
2. Regulate the design of fishing equipment to reduce the number of entanglement events that occur each year.
3. Actively work to eliminate marine mammal entanglements in fishing gear
4. Especially focus on humpbacks, minkes and fins as they face the same issues as right whales but don't get the same effort
5. Marmam protection needs to be strengthened; Assure fishermen have break away lines
6. Protect interest of commercial fishermen regarding entanglements of marine mammals
   Clean up ghost gear to avoid blaming the wrong people
   Buy back of line if gear changes required
   Keep SB open, fishermen are already aware of entanglement / avoid being redundant with ongoing activates regarding entanglement
7. Consider regulations to better protect MarMam from vessel and gear impacts
8. Sanctuary should examine whale interaction with fishing gear and consider regulating within the SBNMS
9. To resolve entanglement problem develop buoy release system for lobstering
10. Also do retrieval of ghost gear
11. Set a fee for retrieval of ghost wire traps
12. ID mobile gear impacts to whales (entanglement issue) and how to protect against this
13. ID fixed gear impacts to whales (entanglement issue) and how to protect against this
14. Ghost gear remediation plan is needed
15. Gill net / lobster gear needs to be marked to ID owner if gear in an entanglement
16. Streamline / modify fixed gear to reduce marmam entanglement
17. Note existing fisheries closures that mitigate entanglement
18. Eliminate fixed gear within SBNMS or have fishermen monitor gear on a full time basis to prevent entanglement
19. Sanctuary Management should take a leadership role in acoustics research. Baseline data is available. Effort should be spent on vessel design to mitigate acoustic signatures.
20. Reduce fixed gear in areas where whales are present to minimize the risk of entanglements
21. Encourage and facilitate the development of whale friendly gear
22. For marine mammals that interact with fixed fishing gear NMFS has developed a variety of management tools (SAMs, DAMs, etc.) intended reduce these impacts.
23. Regarding the matter of ghost fishing gear, I suggest the Sanctuary consider initiating a program to assess and remediate. There are excellent examples of cooperative efforts involving the fishing industry aimed at clearing away such derelict gear. An article on a west coast activity can be found at: http://seattletimes.nwsource.com/html/localnews/134479320_net21m.html.

Working Group Name: Water Quality

Issues Addressed:

3.A No Existing Comprehensive Water Quality Plan
3.B Lack of Baseline Water Quality Data Including Toxins and Contaminants
3.C Appropriateness of Waste Water Discharge by Vessels in SBNMS
3.D Impacts of Municipal Sewage Outfalls and Other Waste Streams

Issue Description:

Water quality underlies the management of all resources in the marine environment, impacting all marine taxa and most human activities. The Federal Clean Water Act of 1972 established as its goal "to restore and maintain the chemical, physical and biological integrity of the nation's waters." The Act suggests that water quality "…provides for the protection and propagation of fish, shellfish and wildlife and provides for recreation in and on the water."[1] Traditional parameters used to characterize water quality include both organic and inorganic nutrients, heavy metals, salinity, dissolved oxygen and anthropogenic chemicals.

Despite intensive vessel-borne activity within the Sanctuary and potential impacts from outside the Sanctuary, there is no existing water quality plan that characterizes impacts and suggests solutions to identified problems.

Background and Regional Context:

The public comment scoping process conducted by SBNMS in 1998, and again in 2002, identified several concerns relative to water quality at the SBNMS. Concerns in this regard included the need to develop a comprehensive water quality monitoring plan at the Sanctuary, the impact of the Boston Harbor Outfall Project on Sanctuary resources, and the impact of vessel discharge on Sanctuary resources.

Sitting at the mouth of Massachusetts Bay, the SBNMS exists in a dynamic oceanographic environment for which a great deal remains to be learned. Potential influences on the Sanctuary's water quality include the potential influx of fresh water, nutrients and pollutants from both the Merrimack River and the Boston Harbor Outfall Project. The Merrimack River, which empties into the ocean north of Cape Ann, may be transporting various pollutants into Sanctuary waters. The Boston Harbor Outfall tunnel, located 12 miles west of the Sanctuary's western boundary,

was opened in 2000 and releases an average of 350 million gallons of treated sewage (secondary treatment) daily. Other potential sources of contaminants include the discharge from vessels inside the Sanctuary, the dumping of fish processing offal in or near the Sanctuary, and the Massachusetts Bay disposal site located adjacent to the western boundary of the Sanctuary.

Existing Regulations:

- Marine Protection, Research and Sanctuaries Act of 1972
- National Marine Sanctuaries Act of 1986
- Federal Clean Water Protection Act

Who are the Players?

Players are defined here as agencies or institutions that are involved in regional management and enforcement of water quality, the major groups or industries that are impacting Sanctuary resources, and other interested organizations or institutions.

Government Agencies (Management and Enforcement)

National Marine Fisheries Service
New England Fisheries Management Council
Massachusetts Division of Marine Fisheries
Massachusetts Water Resources Authority
MassPort
U.S. Army Corps of Engineers
Environmental Protection Agency
United States Coast Guard
Massachusetts Environmental Police

Industries

Fish Processing
Fishing Commercial:
    Mobile gear-fish
    Mobile gear-scallop
    Fixed gear-fish
    Fixed gear-lobster
    Tuna fleet
Fishing Recreational:
    Party charter boats
    Mosquito fleet
Whale Watching
Ferry Businesses
Marine Transportation/Shipping
Tourism

Cruise Lines

Conservation Organizations

Conservation Law Foundation
Ocean Conservancy
Environmental Defense
International Fund for Animal Welfare
International Wildlife Coalition
Center for Coastal Studies
Whale Center of New England
Manomet Observatory
National Audubon Association

Research Universities

Boston University
University of Connecticut
University of Massachusetts
University of Rhode Island
Massachusetts Institute of Technology
Harvard University

Working Group Participants:

SBNMS Staff Team Leader: Ben Cowie-Haskell
SAC Member Chair (1)
Academics (3)
Fishing Industry (2)
Conservation (2)
MWRA (1)
EPA (1)
NMFS (1)
MA CZM (1)
Cruise Lines (1)
Recreational Use (1)

Technical Advisors:

Technical advisors will provide supporting data to the Sanctuary, and may provide presentations on particular topics directly to the working group.

Anticipated Outcomes and Products:

The Water Quality Action Plan will contain a description of the problem, background on oceanography and current status of water quality, threats to the resources and an analysis of risks, and strategies for addressing the issues raised during scoping and during work group discussions.

Proposed Timeline:

A total of five all-day meetings, once a month from September 2003 to January 2004. Additional meetings may be scheduled to deal with specific topics. These meetings might be sub-groups rather than the entire Working Group.

Related Public Scoping Comments

3.A No Existing Comprehensive Water Quality Plan:

Concerns:

1. Partnerships with other agencies with ongoing monitoring efforts are likely to help further the goals related to water quality.
2. Contingency plans should be in place should either site show an impact on Sanctuary waters and marine life.
3. Water quality issues would be highest priority
   Lack of growth this year on lobster pots a concern
   Things are different this year….why?
4. CZM agrees that the absence of a comprehensive water quality plan, a lack of basic water quality data, and the absence of data related to the accumulation of contaminants on Stellwagen Bank are all priority areas that should be addressed as the SBNMS reviews its management plan.
5. The management plan review should include a comprehensive analysis of the Sanctuary's current water quality monitoring protocols and recommendations for improvement.

Actions / strategies:

1.Effects of the Mass Bay Disposal Site should also be monitored.
2. Effects of atmospheric depositions should be studied.
3. Develop a water quality monitoring plan to assess impacts of MWRA outfall and non pt source pollution (nitrogen inputs)
4. Need ongoing water quality monitoring in SBNMS
   Pay attention to implications of climate change and effects on SBNMS such as harmful algal bloomschanges in species distribution
5. SBNMS baseline water quality information should be publicly accessible and regularly reviewed.
6. Current water quality sampling of August and Sept should be expanded
7. Continue coordination of sampling regime with MWRA as well as with other monitoring projects
8. The revised management plan should fully address these potential threats with a comprehensive water quality monitoring program and emergency pollution response plan.

3.B Lack of Baseline Water Quality Data Including Toxins and Contaminants:

Concerns:

1. Concern about water quality and recovery from non point source pollution

Actions / strategies:

1. Further research water quality issues to determine sources and possible mitigation
   Non point; outfall; ocean dumping; up stream rivers
2. Point and non-point source discharges should be monitored to identify the source of any contaminants that adversely impact the Sanctuary habitats. There should be an effort to correlate point sources on land to the sanctuary water quality over an extended period of years.
3. The Boston outfall should be closely monitored for nitrogen signatures, and for the deposition and dispersal of toxics.

3.C Appropriateness of Waste Water Discharge by Vessels in SBNMS:

Concerns:

1. Concerned about mixed use and dumping of gray water from comm. Whale watching boats
2. Dredge material can't be dumped but bilge and ballast water etc can. This is adding to water quality stresses
3. Management decisions made in the coastal municipalities may also affect water quality in the SBNMS.
   For example, the City of Boston is investigating implementing a No Discharge Area (NDA) designation for Boston Harbor.

Recreational and commercial boats that are not allowed to discharge their sewage wastes in Boston Harbor may be more likely to discharge as they leave the harbor and cross SBNMS.
An NDA for Plymouth Bay is being investigated jointly by the towns of Plymouth, Kingston, and Duxbury.

4. Threat brought by any vessel discharge of treated or untreated sewage, ballast water, or gray water.
5. Large numbers of cruise ships and shipping traffic comes through the Sanctuary en route to or from Boston Harbor which presents such a threat to SBNMS.

Actions / strategies:

1. Sanctuary must become a no discharge zone for all vessels
2. Fully regulate discharge of wastes in SBNMS
3. Do not allow waste disposal within 12 mile radius of SBNMS
4. Change reg to eliminate or monitor dumping from cruise ships and whale watch boats
   Monitor gray water discharge and for invasive species
5. Make SBNMS a no discharge zone so long as there is an area closer to shore where discharge could happen; pump out facilities are often closed in winter
6. The SBNS management plan should take into account existing and emerging vessel discharge restrictions and should anticipate how changes in discharge behavior may affect water quality within the sanctuary.
7. There should be no discharge of any sort within SBNMS; There should be no discharge of any sort within any sanctuary
8. Sanctuary should regulate pollution, discharges within boundaries; e.g. gray water, ballast intake, vessel sewage dumping, outfalls
9. Implement no discharging in SBNMS; review current exemptions
10. SBNMS should look at effluent discharge of commercial shippers, cruise ships and whale watch boats
11. Vessels should not be able to dump waste, pump bilges, or dump ballast within the Sanctuary
12. Make SBNMS a no discharge zone so long as there is an area closer to shore where discharge could happen
    pump out facilities are often closed in winter
13. There should be no discharging or depositing allowed within SBNMS regardless of compliance with section 312 of the Clean Water Act
14. The sanctuary management plan update should make certain that sensitive Sanctuary ecosystems are protected beyond the minimum USCG requirements, from any such discharge within Sanctuary waters.
15. The sanctuary management plan update should make certain that sensitive Sanctuary ecosystems are fully protected, through regulation from future discharge schemes.
16. The precautionary principle should be applied by Sanctuary managers in protecting these critical offshore areas from further degradation, given the preponderance of ocean waters in the Northeast that have been damaged or destroyed by human intervention and the public's clear concern about water quality,
17. There should be no vessel discharge in sanctuary from vessels including restrictions on private boats
    there needs to be enforcement of this
18. Change reg to eliminate or monitor dumping from cruise ships and whale watch boats

Questions:

1. Why are boats allowed to discharge in the SBNMS?

3.D Impacts of Municipal Sewage Outfalls and Other Waste Streams:

3.D.1 MWRA:

Concerns:

1. Concerned about influx of fresh, sterile water from MWRA
2. Concern about water quality and recovery due to MWRA;
3. What is the effect of chlorine from MWRA outfall pipe on lobsters?
   They drop eggs when exposed to chlorine; star fish are coming up bleached
4. What are the effects of the MWRA outfall pipe?
   Too much fresh water and contaminants in water

Trickle down effect – catastrophe or slow death

5. Weather patterns change water currents from MWRA pipe
6. MWRA outfall is an issue of concern to fishermen
   Why have systems shifted per "bait bag" monitoring?
7. There was a lack of opposition to MWRA pipeline and extra nine miles into Mass Bay and now we see impacts
8. Water temp hotter than normal this year
9. Lack of plankton blooms in 2002 thus lack of whales, etc; Is this part of a cycle or from the MWRA outfall?
10. SBNMS shouldn't duplicate research on MWRA; instead support ongoing work such as CCS / MWRA and make reports readily available to public
11. Regarding outfall pipe – nothing can be done
    It is on line
    Sanctuary should look at what can be done regarding enhanced monitoring of impacts
12. Fishermen don't want to be blamed for reduction of fish near MWRA outfall pipe when it may be the outfall discharge affecting the ecosystem

Actions / strategies:

1. Assess impacts of MWRA:
2. Outfall pipe must be monitored for impacts including fresh water inflow
   Water temp hotter than normal this year
   Lack of plankton blooms in 2002 thus lack of whales, etc; Is this part of a cycle of from the outfall?
   Why 2002 anomalies?
3. NMFS monitors effects of MWRA outfall on wildlife
   SBNMS should use cooperative research to determine effects on fish and living marine resources
4. Sanctuary should look at what can be done regarding enhanced monitoring of MWRA impacts
5. Concerned about cleaning process by MWRA of "shocking" pipes to clean diffusers; No monitoring of this process
6. Look at impacts of MWRA outfall pipe on whale distribution
7. Get information about the MWRA outfall pipe out to public; make information accessible and comprehensible
8. Use sanctuary authority to influence MWRA outfall sewage treatment; Increase to tertiary treatment
9. Research of MWRA needs to be done by independent objective third party
10. Agency overseeing the MWRA outfall should work with sanctuary management to implement a 'scientific project' regarding the effects of the outfall.
11. Question was raised of where do you draw the line between who monitors MWRA for whether there is 'entry and injury'; should it be MWRA or the Sanctuary? Issues expressed were in terms of scope, hydrodynamic models, where do you draw the line of where monitoring should leave off. Also the issue was raised of whose responsibility is it to manage things that are less causally related to discharge. Should NMS take a stronger position on this regarding the 'enter and injure' provisions?
12. The impacts on habitat and marine life of the outfall from the MWRA project must be monitored. A priority should be to establish a baseline food web study and contaminants load study in the water and in bottom sediment.
13. Any greater monitoring of impacts from the Massachusetts Water Resources Authority's (MWRA)ocean outfall should be funded by water quality regulatory authorities (U.S. Environmental Protection Agency and Massachusetts Department of Environmental Protection).
14. The MWRA Outfall Monitoring Scientific Advisory Panel (OMSAP) is the appropriate venue to address site specific programs for examining the potential impacts of the outfall pipe on fish and marine mammal populations in adjacent waters.

MWRA states:

1. Outfall pipe / secondary treatment goes on line late summer 1999
2. MWRA says they have 7 years of baseline data and has undertaken computer modeling of MA Bay and Cape Cod ecosystem. These indicate outfall will be virtually undetectable at SBNMS boundary.
3. Reviews of the expected discharge and environmental studies have been undertaken within the framework of the

NPDES process.

Previous reviews done by NMFS, EPA, MEPA, DEP, DMF, CZM. These reviews support the above conclusion that the outfall will not negatively impact SBNMS.

4. Draft of NPDES permit includes a 'near field' Ambient Monitoring Plan which is designed to detect significant deviations. This is the best protection of the SBNMS from impacts caused by outfall. Two far field sites in Cape Cod Bay will also be monitored.
5. The draft NPDES requires a contingency plan to react to significant deviations.
6. MWRA expects the final permit to include a process where MWRA annually reports to SBNMS regarding discharge effects on the Sanctuary.
7. The NPDES permit process creates a new science advisory panel to be independent of past research.

3.D.2 Other outfalls:

Concerns:

1. The City of Gloucester has proposed discharging sewage waste offshore, near Sanctuary waters. This presents a grave threat to the health and water quality of the Sanctuary.
2. Coastal development increases stresses on old outfall pipes with increases in incidents of outflow of untreated water

Actions / strategies:

1. If there is a determination that outfall in impacting LMR then through the CWA designate a special water designation for SBNMS

3.D.3 Potential mariculture and fish processing activities:

Concerns:

1. Large-scale mariculture sites, ocean dumping of fish processing wastes, and vessel discharges all have the potential for creating measurable changes in water quality.
2. Each of these activities could affect water quality parameters such as dissolved oxygen, total suspended solids, nutrient levels, and settleable solids.
3. Antibiotics, hormones, and synthetic endocrine disruptors are becoming more important as the human influence on Stellwagen Bank increases due to industrial, recreational, and municipal activities.

Actions / strategies:

1. CZM recommends that the SBNMS staff continue to provide input into siting and compliance-related monitoring of permitted activities.

Work Group Name: Public Outreach and Education

Issues Addressed:

4.A Low Name Recognition

4.B/C Better Information Dissemination to the Public and User Groups through Leveraged Partnerships (also encompasses comments addressed in 4.D—curriculum development)

Issue Description:

This is a problem on both a national and site level, as "National Marine Sanctuary" is not a well-known term among the general public. While many people are familiar with the National Parks and the National Forests, the Marine Sanctuaries are little known (in many cases because visitation is difficult, costly, or requires a vessel). Also, the NMS program is much smaller in number of sites and size of budget than the other systems, which leads to a lessened impact in the NMS program's ability to reach the general public.

Partnering is one of the areas in which the Sanctuary has put great effort but could always increase its level of collaboration. Leveraged partnerships aid all participants by using the limited resources of each individual group to make a product or program that would be impossible by any one group alone. Products and programs for specific user groups must be content-based and meet user needs and requirements. The various users for whom products may be developed or who might be called upon to partner are: teachers/professors/non-traditional educators and schools/colleges/nature centers, whalewatch operators and naturalists, boat owners, fishermen, shipping companies, cruise lines, museum staff, and the general public. Once these materials are developed, they can be reworked into any number of similar products for other secondary audiences. Once a product is developed, the next challenge is getting it into the hands of the appropriate users. Partnering arrangements provide an ideal opportunity for dissemination of Sanctuary products by increasing audience outreach.

Background on Issue Description:

The Sanctuary is named for an underwater plateau (which was named for the hydrographer who mapped it in the mid-1850s). There are several points here that contribute to the problem of low name recognition:

1) the feature is underwater and "invisible" to the general public;

2) the feature is deep enough such that it is not a concern to boaters;
3) the area is heavily traversed by ships and fishing boats, has cold temperatures, stiff currents, and is located a distance from shore making it a poor location for recreational SCUBA diving;
4) Henry Stellwagen, the person who mapped the bank, is relatively unknown to anyone except his descendents, making the geological feature's name less memorable;
5) Stellwagen is a difficult name to remember; and is often misspelled (making for difficulties in accessing information about the site);
6) the official name is so long, that it becomes difficult to say and/or remember; and,
7) the area has been known by other names in the past (Middle Bank, Middle Ground).

Partnerships are an effective way of extending resources and reaching new audiences. Links to outreach centers (such as the New England Aquarium), user group organizations (such as Mass. Lobstermen's Association), and other institutions (such as Environmental Defense or Massachusetts Marine Educators) allow the Sanctuary to increase dissemination of pertinent information. But better information dissemination through leveraged partnerships also implies that there are education/outreach products that will be available for distribution. The development of appropriate products must be part of the equation.

Targeted audiences often need highly specific information and products. For example, educational materials for schools must be content-based and tied to state frameworks. They must have substance (cursory information will not be sufficient). However, once these materials are developed, they can be reworked into any number of simpler products for more general use (e.g., public information brochures, museum exhibits, web fact pages).

Regional Context:

The Stellwagen bank National Marine Sanctuary is the only National Marine Sanctuary in the northeast, and as such should receive greater local attention. However, the combination of its name and its location create difficulties (concerns about the name are addressed above). The location of the sanctuary offshore creates problems in that the public can't easily participate in stewardship programs, or feel "ownership" of this national resource.

One favorable aspect concerning the Sanctuary's location is that it is near a major media market (Boston area) and not far from one of the nation's largest markets (New York). Marine issues have been receiving heightened interest from the media over the past few years, and Sanctuary staff members have had an increasing level of contact with reporters about a variety of subjects.

This media involvement is highly content-based, however, and requires that the Sanctuary staff provide substance (technical expertise and/or imagery).

The Boston/New England area is also a center for education and public outreach, with a number of institutions (schools and museums) specializing in marine studies, science education, science journalism, maritime archaeology, and other subject areas of interest to the Sanctuary. Associations with these institutions can provide capacity building in the Sanctuary's efforts to increase name recognition. Exhibits are regional museums and aquariums can also help in the campaign to increase visibility and recognition.

The effective Sanctuary coverage area is Maine through Connecticut, and inland throughout New England along with the international audience that comes to this region for whale watching and other marine recreational pursuits. The audience is immense and greatly dispersed (although there are some concentrated pockets -- Boston, whale watch ports, fishing ports, etc.).

Among educators in the region there has been an expressed need for educational resources that focus on local marine species and habitats. Information on coral reefs and the deep abyss is plentiful; information on muddy basins and sandy banks is difficult to find. For example, the New England Aquarium only offers a few small tanks on local species on its top floor.

Existing Regulations:

There are no specific regulations pertaining to low name recognition or partnerships, but there are a few issues/actions that should be noted:

- The "National Marine Sanctuaries" term is trademarked, making use of it problematic.
- The need to get NOAA's logo and name included in all outreach products creates additional public recognition issues.
- We have to be careful about conflicts of interest with potential partners and assure compliance with regulations pertaining to use of outreach materials (web restrictions, copyright issues, licensing rights).
- All new educational curricular materials intended for schools must meet state and/or national standards (or they will have little likelihood of getting into classrooms).

Why this Issue is Relevant to SBNMS:

Name recognition is the first step in building stewardship of the Sanctuary. If people do not know who, what and where we are, why should they care? Greater name recognition of the Sanctuary among the public will attract further interest from potential partners in education,

outreach, resource protection and research. Name recognition must be part of a program to provide functional information to the public and specific user groups. Partnering with other organizations will leverage the Sanctuary's ability to develop subject content and facilitate broader dissemination of information products.

Who are the Players?

Players are defined here as regional agencies or organizations that are involved in the production and dissemination of marine-related outreach products and/or programs.

Government Agencies

- National Marine Fisheries Service
- United States Coast Guard
- National Weather Service
- U.S. Geological Service
- National Park Service (Cape Cod National Seashore, Salem National Historic Site)
- NERR system
- Coastal America
- Massachusetts Environmental Police
- Mass. Board of Underwater Archaeological Resources
- Mass. Coastal Zone Management
- Mass. Executive Office of Environmental Affairs
- Massachusetts Division of Marine Fisheries
- MassPort

Businesses and Industry Organizations:

- Commercial Fishing
- Recreational Fishing
- Party and Charter Boat Fishing
- Recreational Boating
- Commercial Whale Watching
- Ferry Businesses
- Cruise Lines
- Tourism

Conservation Organizations

- International Fund for Animal Welfare
- International Wildlife Coalition

Ocean Conservancy
Center for Coastal Studies
Whale Center of New England
Plymouth Marine Mammal Research Center
Massachusetts Audubon Society
New England Aquarium
Manomet Observatory
Conservation Law Foundation
The Humane Society of America
International Fund for Animal Welfare
Museum of Science
Peabody Essex Museum
Scituate Maritime and Irish Mossing Museum
Cape Cod Museum of Natural History
Nantucket Whaling Museum
New Bedford Whaling Museum

Educational Organizations and Schools and Colleges

Massachusetts Marine Educators
National Marine Educators Association
Mass. Association of Science Teachers
Mass. Association of Science Supervisors
Mass. Environmental Education Society
Town School Systems/Individual Schools
Boston University (Graduate Program in Science Journalism)
University of Connecticut/National Undersea Research Center
Sea Grant College Programs (MIT, WHOI, UNH)

Working Group Participants:

SBNMS Staff Team Leader: Anne Smrcina
SAC Member Chair (1)
Aquariums/Museums (2)
Public Education (elementary, middle, high school) (3)
Universities (2)
Media (print/electronic) (2)
Public Awareness (2)
Conservation Groups (2)
Government Public Information Officers (2)
Fishing Industry (1)
Whale Watching (1)

Technical Rep: Recreational User (1)

Technical Advisors:
Technical advisors will provide supporting data to the Sanctuary, and may provide presentations on particular topics directly to the working group.

Anticipated Outcomes and Products:

The working group will develop:

1) Media strategies that will strive to raise awareness of the sanctuary among print and broadcast media;
2) A prioritized list of activities/products that will raise awareness of the sanctuary among the general public;
3) A list of products (print and electronic) that may be advantageous in advancing Sanctuary awareness around the country and especially in New England among specific audiences, including but not exclusive of educators, boaters, whalewatch operators, fishermen, shipping, researchers, and conservation organizations; and,
4) Strategies to develop partnerships and criteria for evaluating and ranking proposed partnerships.

Proposed Timeline:

5 meetings:

- September 2003: Hold introductory meeting to set context, develop goals and objectives, agree on ground rules, assign, assign work tasks, etc.

Related Public Scoping Comments:

4.A Low name recognition:

Concerns:

1. Don't have good grasp what people are doing in Sanctuary
2. Publicity is very important
   NPR might be a good way to get the word out; public TV; mailings; articles written
   Should use technology to reach a broader audience
   Should get to youth; this is very important
   National campaign, especially to children, the equivalent of "don't be a litterbug" for the ocean
   Need launching point for publicity regarding policy and uses of resources
   Current Wind energy discussion could draw greater public attention to resource exploitation
   NPR, schools, Aq's great ways to let people know how important NMS are
   Discovery channel episode, etc. to raise public awareness of SBNMS
3. If sanctuary could talk about overfishing, pollution that might give the public something to relate to
4. SBNMS belongs to everyone, people need to know this
   -People should be proud to protect NMS
   -Outreach to the Midwest who don't know about Sanctuaries; this is a National Program….
   -Identify how / what people think about NMS, how or if appreciate them, who / how uses them?
5. Remember the importance of the visceral experience of wildness by way of whales.
6. A recent public opinion poll commissioned by CLF early this year found that the majority of New England residents surveyed knew little if anything about New England's only national marine sanctuary.
7. Vast improvements in public understanding, appreciation and support for marine resource conservation efforts are critical to building the strong public constituency necessary for continued political support of the Sanctuary.
8. Tuna industry does not support the use of federal funds to raise public awareness of the Sanctuary beyond existing activities.
9. Increased awareness entails increased usage of Sanctuary resources, which may be counterproductive to primary Sanctuary objectives.
10. While SBNMS is critical to New England, sanctuary is a National issue similar to the decision to protect the ANWR

Actions / strategies:

1. Expand support for ocean stewardship and the concept of sanctuary by creating a creative messaging strategy to advertise a fresh look at why sanctuaries are important places to that you reach multiple audiences.
2. Avoid traditional dull bureaucratic marketing
3. Ptown exhibit is good but need more attention to get people there
4. Increase recreational use other than WW (diving, kayaking etc) through public outreach
5. Need more video / photo of SB to increase awareness – public broadcasting, web cams
6. Declare SBNMS day once a year for all users to come together and celebrate
7. Develop creative marketing plan. Need to use "show biz" approach to educate; sophisticated outreach program not standard govtl fare
8. Advocates for a buoy system at SBNMS to notify users of sanctuary boundary
9. The public should know more about the mission statement. Most members of the public are unaware of SBNMS; Many thought it was a financial institution
10. NMSP message should be conservation and sustainable use of biological diversity
11. Sanctuary should act as more of a focal point for education on cultural and natural resources
12. SBNMS must establish a dedicated Education advisory council
    -Education regarding the existence and importance of SBNMS is critical.
    -The mandate of the council would be to explicate the role of the sanctuary and management needs for making the sanctuary more visible to multiple audiences.

-The education advisory council would also facilitate partnerships with NGO's, commercial and academic organizations.

-This outreach effort will build powerful constituencies.

13. Develop SBNMS information center in Gloucester
14. Make SBNMS management more visible to the public
15. Extend into north shore and Boston through venues or interpretive centers
16. Create year round education center
17. Visitor centers should be placed in every major Massachusetts port – particularly in Boston where high levels of tourism could generate large numbers of visitors.
18. Gloucester would like to be a gateway to the sanctuary, including a visitors center and excursion trips
19. Increase visibility of SBNMS – develop a high profile visitors center
20. Create a visitors center on Cape Ann
21. There need to be more public exhibits in various places around Boston area and north shore

4.B Better Information Dissemination to the Public and User Groups:

Concerns:

1. The sanctuary should become the formal clearing house of information for naturalists, the general public, research groups, etc for information on SBNMS resources and qualities.
2. Ownership is an important concept to create atmosphere for changing relationship to managing ocean
3. The oceans are owned by the people in the Midwest just as much as a user (i.e. fisher)
4. The public must know what progress is being made and it is in the best interests of SBNMS to advertise its accomplishments
5. "Public" needs to mean general public not just industry (fisher) or users
6. Putting all the information and decision processes in the public domain i.e. on the web would lead to transparency that is very powerful for the constituencies.
7. Interested in east side of SBNMS that overlaps with WGoM closure including: what is sanctuary investigating, where; what period of time; what results are

   Make this an open process on the grounds that SBNMS is opposing redrawing WGoM closure due to ongoing research

Actions / strategies:

1. Need to use "show biz" approach to educate; sophisticated outreach program not standard govtl fare
2. Needs to be more shared information between stakeholders that utilize SBNMS
3. Need to help public understand threats below the surface
4. Connect below sea re: food web to use concept to connect people to resources (e.g. extinct cod may affect marine mammals)
5. Website needs significant attention – currently unusable
6. Create a "friends of the Sanctuary" group
7. Create a database of ongoing projects on all aspects of activities in SBNMS
8. Create an education advisory panel that will help engender spirit of ownership in outreach projects, contribute to curriculum development and integrate with the regional partnerships to enhance visibility of the site.

   9. Make data on problems and activities within SBNMS more available
10. Follow through with offers on web page (ex: CD)
11. Sanctuary reports don't include enough data; compile preexisting data; identify data gaps and communicate this
12. Utilize educational vessels out in SBNMS for outreach, education , research
13. Reach out to young kids with respect to fishing community; culture; heritage; not just the ecological aspects of the Sanctuary
14. Establish baseline info and make that information publicly available. Few people (including SBNMS) know what the status of the sanctuary is

15. Educational component of SBNMS should target value of resources and not negative impacts of human uses16. Regulated users within SBNMS need to be able to understand regulations / management within SBNMS
17. Make SBNMS management more visible to the public
18. Extend into north shore and Boston through venues or interpretive centers
19. Provide opportunity to show / educate public on policies (human interaction and biology of marine ecosystems)
20. Need to use all available tools such as internet; cd roms to schools; to districts
21. Have educational video at public aq.; provide handout materials to let them know the Sanct is there.
22. Educate on resource protection issues; How human activities affect the resources
23. Educate about identifying something as a resource separates humans from its life history and so makes it easier for us to take too much without being responsible for the effects on the "resource"
24. SBNMS needs to incorporate concept of preserving cultural integrity and link to marine reserves

Coastal towns and culture linked to marine resources communicate what your cultural link to ocean is marine resources

25. NMSP message should be conservation and sustainable use of biological diversity
26. SBNMS has a bias towards advertising whales as their charismatic mega fauna; cod sitting on the bottom are as important
27. Provide more high level, quality education, public outreach including public meetings, issue specific workshops.

Provide follow-up on results of scoping; provide for more public involvement and engagement

28. Profile research and publish as soon as possible; Information takes too long to get to the public and decision makers
29. Make public aware of research that would show the importance of the sanctuary
30. Establish outreach program for fishermen
    -Many fishermen are unaware of Sanctuary and potential changes that may impact them
    -Include federal fishing permit holders on correspondence lists
31. Competing political agendas dictate that now, more than ever, the Sanctuary needs to educate the public about their marine backyard and build a strong public constituency to support the management and protection of the Sanctuary's remarkable marine resource ecosystem.
32. Periodic lecture series similar to that just launched at the New England Aquarium (fall '02) should be planned throughout the region.
33. All research and monitoring results should be available through technical reports and grey literature
34. A list of peer reviewed publications should be placed on the web site
35. Documents detailing progress made with implementing goals and responsibilities should be made readily available and easily accessible to general public in a timely manner
36. Other "charismatic mega and micro-fauna" such as basking sharks, *Mola molas*, schooling fish, phosphorescent plankton should be highlighted in order to demonstrate the variety and complexity of the ecosystem that exists at Stellwagen Bank.
37. Create a "friends of the Sanctuary" group
38. Get the interested public involved.
39. Be more communicative and effective in accepting volunteer contributions
40. Develop events to involve the public in a meaning full way: have people sailing out to the fishing grounds;demonstrating how people fished!
41. Develop volunteer corps to assist SBNMS
42. Create "baykeeper" program to keep an eye on the resource
43. Declare SBNMS day once a year for all users to come together and celebrate
44. Create more opportunity for public to get involved
45. Pass out flyers to seek public input
46. Seek innovative ways to involve public in different ways; There are many ways to involve people – tap into them
47. Get younger generation involved so they will work to preserve SBNMS
48. To assure continued support for site, develop performance measures and provide annual publiclyvisible report on success towards meeting management goals
49. Make SBNMS management more visible to the public
50. Public comments and decisions should be available on the SBNMS website

51. All sanctuary programs should be available for review on an annual basis and should be posted on the web for public input and comment.
52. All public comments and management decisions should be available on the Sanctuary website. This information must be presented in a way that is easily understandable to a wide audience.

4.C Program Support Through Leveraged Partnerships:

Concerns:

1. Education goes with enforcement – people shouldn't claim ignorance
2. Concerned that education especially and outreach is the first to go when budgets get tight….this is a BIG mistake
3. Competing political agendas dictate that now, more than ever, the Sanctuary needs to educate the public about their marine backyard and build a strong public constituency to support the management and protection of the Sanctuary's remarkable marine resource ecosystem.

Actions / strategies:

1. Expand and fully fund outreach efforts
2. Create a "friends of the Sanctuary" group
3. Make sure outreach is reaching full diversity of communities
   People of color, low income, urban, Spanish speaking and other language groups
4. Don't exclude western part of state in outreach and educational efforts
5. Provide more public education on the "state of the sanctuary" and sanctuary management
6. NMSP needs to raise program awareness with the public
7. Sanctuary should act as more of a focal point for education on cultural and natural resources
8. Explore having underwater cameras – maybe on buoys with lights to attract LMRs
9. Work on finding funding for educational video….Carnegie Inst provided original funding
10. Set up working group of advisory council to deal with educational / outreach component
    Partnerships / collaborations with people on the water
    School collaborations
11. There needs to be more education and better outreach about what types of fishing occur in SBNMS and about how fish are caught in general
12. In educating about types of fishing include progress by fishing industry towards environmentally friendly fishing practices
13 . Scientists need to play a more active role in communicating the importance of natural systems.
14. Should use museums to educate people about NMS; what are issues then and now re: management
15. Need forum to talk to visitors about fisheries issues; Partnerships with Aq, museums
16. Education and outreach programs must link with research facilities, schools, whalewatching industry, aquariums
17. Is SBNMS using logo for private programs? Avoid the commercialization of NMS logo for private corps.
18. Budget for ed needs to be increased; if SBNMS had the money they could better take advantage of regional partnerships; also partnerships are a good way to secure funding and leverage critical mass of dollars
19. Identify outreach and educational opportunities with outside entities
    Internet access from ships for real time data
    Track marine life; observe from remote location; superimpose with GPS info from ship
20. The Sanctuary should align with the APLIA and Marine Affairs Association of the RI 7 ABA Associations as well as Roger Williams Univ School of Law to develop and change laws to improve environmental legal and legislative endeavors. Many students and graduates would likely enjoy participating in Sanctuary activities, perhaps pro bono and voluntarily.
21. Partnerships must benefit all parties involved.
22. Resources should be focused on creative programs and not duplicative of ongoing projects by other agencies or organizations

23. Tuna Assoc believes it is important that Sanctuary funding not be employed to advertise the product of private enterprises benefiting from Sanctuary resources.
24. With the help of SBNMS, Gloucester would like to build educational programs based on the resources and research on SB
25. Gloucester would like to increase the understanding of their maritime history and culture
26. Desired actions for the Sanctuary may likely be accomplished through these partnerships with relatively little expenditure of SBNMS resources but could still meet your needs.

4.D Public Education Through Curriculum Development:

Concerns:

Actions / strategies:

1. Assist with curriculum development on issues affecting SBNMS
2. Need to perform better educational outreach: Create Video and Kids curriculum
3. Researchers doing work in other countries; how to entice them to do work here in SB?
   Outreach to academia to get those people involved.
4. Host forums for students at universities re: programs occurring at SBNMS / NMS
5. SBNMS is a great resources for studying; Develop internship / research program
6. SBNMS needs to be more involved in education and outreach, especially to elementary schoolers
   This is critical time to get kids to understand importance of healthy ocean
7. Match educational programs / curriculum to state and local frameworks / curriculum in MA
   How do educational projects mesh with state / local educational goals?
   This is a good way to find partners and leverage money
   Partner with local university system
8. Perform training of people who will train teachers about SBNMS (teacher workshops)
   Inform of resources available for educational purposes
9. Establish education programs with local colleges
10. Develop linkages with high schools
11. The plan should consider actions to increase the Sanctuary's role in marine resource education through established programs and inst
    Maine Marine Educators Association, the National Ocean Science Bowl, and regional colleges and universities.
12. Set up working group of advisory council to deal with educational / outreach component
    Partnerships / collaborations with people on the water
    School collaborations
13. Revisit the voyage of the Mimi (1980)
    Do a Mimi II with Ben Affleck to share SBNMS with entire country
    Affleck would provide name recognition for Sanctuary

Working Group Name: Maritime Archaeology

Issues Addressed:

5.A Need for inventory and assessment of archaeological resources
5.B Lack of a plan for protection
5.C Lack of interpretation

Issue Description:

The SBNMS represents a rich repository of cultural resources and, to a lesser degree, prehistoric artifacts. Most of the known cultural resources are in the form of historic shipwrecks. The extent and importance of the shipwreck inventory is just beginning to be known. Shipwreck exploration and inventorying began in earnest in 2002. After two research cruises that year, twelve wrecks were investigated three of which were confirmed to be historically significant. These wrecks generated tremendous public interest. Approximately 30 more potential shipwreck anomalies exist but have yet to be investigated.

The National Marine Sanctuaries Act requires that all sanctuaries inventory and document their archaeological resources. Given the existence of historically significant wrecks in the SBNMS and the likelihood of finding more and the keen public interest in these wrecks, it is incumbent on the Sanctuary to continue its efforts to inventory and document maritime archeological resources. However, currently no plan exists that details how the inventory will be conducted, what will be done with the information, and how it will be interpreted for the public. Thus, the purpose of the Maritime Archaeology Working Group is to craft an action plan for addressing these and other issues.

Background and Regional Context:

The public comment scoping process conducted by SBNMS in 1998, and again in 2002, identified several concerns relative to archaeological resources at the SBNMS. Concerns included the need to inventory and assess archaeological resources, the need to develop a plan for protecting and managing these resources, and the need to interpret these resources for the public.
Sitting at the mouth of Massachusetts Bay, the SBNMS represents the current and historic gateway to one of America's oldest ports. Every ocean going vessel entering and leaving Boston had to traverse the Sanctuary waters. As such there are considerable historic resources located on

the seafloor of the Sanctuary. As evidence of this, the USGS multibeam sonar map of the Sanctuary seafloor reveals over 50 potential anomalies.

Existing Regulations:

- National Marine Sanctuaries Act
- National Historic Preservation Act

The National Oceanic Atmospheric Administration (NOAA) has the responsibility to protect and manage cultural resources discovered within a National Marine Sanctuary. The National Marine Sanctuaries Act (16 USC § 1431, *et seq.)* mandates NOAA to abide by laws and regulations of the Federal Archaeological Program. These include developing resource management programs and overseeing federal activities that may affect cultural resources. Among its responsibilities, NOAA issues permits necessary for the exploration or disturbance of a cultural resource. NOAA also has a responsibility to inventory and evaluate cultural resources within sanctuaries, and nominate them to the National Register of Historic Places.

There are three Sanctuary-specific regulations that pertain to cultural resources (excerpt from 15 CFR 922.142):

(3) Drilling into, dredging or otherwise altering the seabed of the Sanctuary; or constructing, placing or abandoning any structure, material or other matter on the seabed of the Sanctuary, except as an incidental result of:

(i) Anchoring vessels;
(ii) Traditional fishing operations; or
(iii) Installation of navigation aids.
(4) Moving, removing or injuring, or attempting to move, remove or injure, a Sanctuary historical resource. This prohibition does not apply to moving, removing or injury resulting incidentally from traditional fishing operations.
(7) Possessing within the Sanctuary (regardless of where taken, moved or removed from), except as necessary for valid law enforcement purposes, any historical resource, or any marine mammal, marine reptile or seabird taken in violation of the MMPA, ESA or MBTA.

Prohibitions 3 and 4 contain an exemption for disturbance caused by traditional fishing activities. This is a concern because fishing activities can easily damage or cause the loss of cultural resources. For example, a gillnet, longline or trawl net could easily topple the smokestacks or walking beam on the *Portland*.

Who are the Players?

Players are defined here as agencies or institutions that are involved in regional management and enforcement of archaeological resources, the major groups or industries that are impacting Sanctuary resources, and other interested organizations or institutions.

Government Agencies (Management and Enforcement)

- SBNMS
- Massachusetts Bureau of Underwater Archaeological Resources (BUAR)
- NOAA Office of Law Enforcement
- United States Coast Guard
- National Park Service
- Massachusetts Environmental Police

Industries

- Fishing Commercial:
  - Mobile gear-fish
  - Fixed gear-fish
  - Fixed gear-lobster
- Fishing Recreational:
- Party charter boats
- Private boats
- Diving Recreational and Technical

Academic Institutions

- University of Connecticut
- University of Maine
- Massachusetts Institute of Technology
- University of Rhode Island

Working Group Participants:

SBNMS Staff Team Leader:	Ben Cowie-Haskell
SAC Member Chair (1)	
SBNMS Staff:	Anne Smrcina (education)
NMSP Staff:	Bruce Terrell (program analyst)
	Jeff Gray
Academics (2)	
Museum (1)	
Other government (2)	National Park Service
	MA Bureau of Underwater Archeological Resources
Fishing Industry (2)	
Whale Watching (1)	

Diving (1)	
Conservation (1)	
Private (2)	Public Archaeology Lab, Inc.
	American Underwater Search and Survey, Inc.

Technical Advisors:
Technical advisors will provide supporting data to the Sanctuary, and may provide presentations on particular topics directly to the working group.

Anticipated Outcomes and Products:

A Maritime Archaeology Action Plan will contain a description of the problem, background on archaeological resources and their importance, threats to the resources and an analysis of risks, and strategies for addressing the issues raised during scoping and during work group discussions.

Proposed Timeline:

It is anticipated that five working group meetings will be needed to finalize the action plan from July to December 2003.

Related Public Scoping Documents:

5.A Need for Inventory and Assessment and Comprehensive Characterization of SCR's:

Concerns:

1. SBNMS has recently placed too much emphasis on SCR's; Other authorities and entities exist to handle that
   These others, more expert than SBNMS, should have lead
2. Cultural resources should not take priority over natural resources
3. Marine resources should be a priority of SBNMS
   Cultural resources are important but there are many other entities looking out for them

Actions / strategies:

1. SBNMS should develop comprehensive GIS inventory of cultural resources and an integrated program of archeological and historical research
2. Utilize fishermen's knowledge to help identify SCR; Losing information by not asking fishermen's help
3. A significant level of basic data acquisition has already taken place within the Sanctuary that identified potential submerged cultural resources, chiefly shipwrecks. Much of this data acquisition was undertaken for purposes other than the identification of cultural resources.
4. SBNMS should systematically address SCR through broad program of system wide surveying
5. It is not clear whether the previous data acquisition efforts (mapping and characterization research) was adequate to identify all potential sites or simply a fortuitous bi-product of other research.

SBNMS would need to determine if there were data gaps and how to fix them.

6. SBNMS should not concentrate on one site, S.S. Portland, and ignore the rest of their cultural resources.
7. No exploration of SCR in SBNMS

5.B No Plan for SCR Management and Protection:

Concerns:

1. NOAA has statutory responsibility to preserve SCR under its jurisdiction
2. SCR management is euro/american centric

Actions / strategies:

1. Do not change SCR regs
2. Do not turn this into a public dive site
3. Protect cultural resources such as the shipwreck of the "Portland" from ALL disturbance.
4. SBNMS should release coordinates of Portland, especially to draggers
5. Need better efforts / improved focus on Native American SCR's
   Should research existing treaties for proper identification of SCR ownership
   Respect and honor all treaties
6. Make better efforts to know what Native American SCRs exist in SBNMS
7. There has been no outreach to local tribal entities and inter tribal councils
   Must preserve oral tradition regarding SBNMS area
8. To expand SCR efforts beyond ship wrecks look to Danish model
9. Better define SBNMS position on salvage
   Position on implementation of salvage law regarding the marine envt; Also archaeological resource protection laws;
   What constitutes and SCR in SBNMS exactly?
10. The Sanctuary should develop a management plan which follows these steps:
    (1) inventory (discovery and recording the resources present);
    (2) evaluation (determining their scientific and public importance);
    (3) planning (determining how they would be most appropriately used);
    (4) protection (safeguarding the resource);

(5) utilization (authorizing or otherwise accommodating the proper use)(taken from: Cultural Resource: Problems Protecting and Preserving Federal Archeological Resources. GAO: December 1987).

11. SBNMS needs to consider the potential for the preservation of prehistoric sites and ways to identify these resources as well as other potential historic period resources such as aircraft.
12. There are a host of other institutions in the area that can do a satisfactory job of exploring these.
13. The SBNMS has limited resources, and those resources need to be used carefully to carry out the Sanctuary's work. There are few other groups that are charged with protecting the marine resources as the SBNMS is. The maximal amount of resources needs to be devoted to this end.
14. SBNMS should dedicate its resources to ecosystem protection mission of SBNMS rather than SCR's
15. A major goal would be determining a site eligibility for inclusion and, ultimately, listing that site in the National Register of Historic Places.
16. Prioritize living marine resources over historical cultural resources in future work

5.C Lack of Public Awareness / Interpretation of SCR's:

Concerns:

1. Consider the historical usage of the area and maintain access
   Cultural history includes fishing on the bank
2. SCR provides opportunity to capture public's imagination and interest
3. Interest in SCR can be used to expand on larger message of ocean stewardship and health of Sanctuary

Actions / strategies:

1. Use history of human use of SB to provide positive outreach for cultural heritage of area
2. SCR can be used as a means to illustrate historical human dimensions of SBNMS waters
3. Decode human maritime cultural landscape in SBNMS
4. History below the surface (e.g. wrecks) is important; get story out regarding how marine resources have brought economic pro's to US
5. There has been no outreach to local tribal entities and inter tribal councils
   Must preserve oral tradition regarding SBNMS area
6. No outreach has been done to regional archaeological societies so no opportunity for them to provide input

Work Group Name: Administrative Capacity and Infrastructure Development and Maintenance

Issues Addressed:

7.A: Base-Level Staffing and Program Support
7.B: Infrastructure Development and Maintenance

Issue Description:

Concern was expressed during public scoping that the Sanctuary was inadequately funded and staffed to meet public expectations of program performance, and ultimately to realize effective resource management and protection. Occasional statements to the contrary suggested the Sanctuary was an unnecessary public expense.

Background and Regional Context:

Although some increases in programmatic budget and staffing have been made since the Sanctuary was designated in 1992, additional internal and external demands are being placed on the level of site resources and administrative capacity.

For example, growing maturation of the National Marine Sanctuary Program requires site compliance in expanded fiscal reporting, operations planning, human resources development and use of information technology. Devolution of formerly centralized administrative functions to the site, such as procurement processing, travel management, and time and attendance tracking and recording requires additional clerical support. Implementation of new programs, in concert with Management Plan Revision and resultant action plan development, requires additional professional staff; so do such key functions as advisory council and volunteer coordination.

Renovation and maintenance of the Sanctuary's administrative headquarters (newly acquired from the U.S. Coast Guard) is essential to protect this capital asset and to adapt it for more effective use by the Sanctuary. Costs of grounds care, snow clearance, janitorial services, alarm systems monitoring and maintenance, and routine and emergency repairs currently compete for funding allocation with such core programmatic functions as research, education and enforcement. The Sanctuary's aged research vessel has grown unreliable, no longer meets the needs of the Sanctuary, and should be replaced with an upgraded and more appropriate substitute.

Relevance to Stellwagen Bank National Marine Sanctuary

1. As part of its evolving maturation, SBNMS is looking inward to review its operations and critically assess program needs and requisite support. New mechanisms, for example, to hire and underwrite support for interns, teachers and visiting scientists working on Sanctuary projects need to be established. Options to leverage base budget allocations need to be considered

2. Grant programs and other sources of supplemental funding from within and outside of government need to be identified to further SBNMS interests. Appropriate mechanisms to form strategic partnerships that qualify for such grants need to be formulated and put in place.

3. Additional mechanisms need to be institutionalized to provide for volunteer coordination and to form a local "Friends" organization that links to the National Marine Sanctuaries Foundation. Volunteers can supplement Sanctuary staff in such activities as public outreach and office assistance, while a "Friends" organization can help raise supplemental funds for Sanctuary sponsored education and research.

4. Major renovations to the Sanctuary's new offices (a former Coast Guard station in Scituate) now underway will provide expanded facilities for staff and greatly increase capacity for public outreach and research. These facilities need to be optimally utilized and well maintained to cost-effectively support Sanctuary operations over the long-term.

Existing Regulations:

Not Applicable. But NOAA policies and procedures as well as all other pertinent federal rules and guidelines related to agreements, gifts, procurement, property management, etc. will be followed.

Who are the Players?

National Marine Sanctuary Program (site and national)
National Marine Sanctuaries Foundation
Potential partners: NGOs, government agencies, universities, industry associations, etc.

Working Group Participants:

SBNMS Staff Team Leader:	Nathalie Ward
SAC Member Chair (1)	
SBNMS Staff (1)	Administrative Support Specialist
NMSP Volunteer Coordinator (1)	Mary Engstrom
NMS Foundation staff (1)	

Public with experience /skills in program administration, property management, docent program operation, organized fund raising, etc.

Technical Advisors:
Technical advisors will provide supporting data to the Sanctuary, and may provide presentations on particular topics directly to the working group.

Anticipated Outcomes and Products:

Leveraged program funding, increased program outputs and higher overall level of site performance. Optimized control of fixed costs and effective facilities utilization.

Proposed Timeline:

It is anticipated that four all-day meetings of the working group will be needed to finalize the action plan:

- August 2003 (1 day): Introductory meeting to set context, develop goals and objectives, agree on ground rules, assign work tasks, etc.
- October 2003 (1 day): Review progress to date, consider additional tasking and begin drafting action plan.
- November 2003 (1 day).
- December 2003: Review draft action plan.

Related Public Scoping Comments

7.A Base Level Staffing and Program Support:

Concerns:

1. SBNMS does not have enough money or staff to deal with current research, monitoring, enforcement, outreach, Budget needs to increase to be able to perform mandate in future
2. NMSP describes itself as cutting edge but that's so only in those sites with high political visibility and significant budgets, NMSP needs to be tending to all sites
3. Concerned about the issues in the original MP that didn't get dealt with. Does SBNMS have capacity to do its job?

Actions / strategies:

1. Clarify the administrative capacity of the site to perform obligations
2. Need enforcement bodies
3. Increase research funding for SBNMS if not currently enough to meet mandate
4. Increase proper resources for education and outreach (more staff and $)
5. Challenge stakeholders to develop creative solutions to management activities
6. The staff must work as an integrated team and increase intra and inter agency relationships.
7. Additions to the Sanctuary staff should result from a national pool of applicants with diverse backgrounds to encourage creative thinking and broaden input.
8. Clarify what is a fully staffed site.
9. Create long term goals for SBNM

7.B Infrastructure Development and Maintenance:

Concerns:

1. Concerned that sanctuary does not have proper human nor financial resources
2. Need better infrastructure – more $ for new office
3. Need a functional research vessel
4. SBNMS needs to take an active role in setting example for minimizing environmental impacts within the agency
5. Sanctuary budget is too excessive; not justified given role of sanctuary and duplication of roles performed by other agencies; SBNMS should have budget cap
6. It should be the responsibility of a user of the Sanctuary to justify that their activity won't adversely affect the resource. For example, require a conservation plan, a monitoring plan and a risk assessment of the activity. Users should pay for their own management
7. The primary goal of resource protection and ecosystem management must begin, not within the Sanctuary boundaries, but within the SBNMS office.
   Programs including office recycling, utilization of pump out stations and the use of biodeisel for the Sanctuary vessel or vessels should be mandatory.
   Office renovations should be done with the primary consideration of energy efficiency and alternative energy sources.
8. Part of change in status quo management is to avoid hypocrisy by having an environmentally sound facilities plan to be as low impact as possible through "sustainable administration"

Actions / strategies:

1. Estimated costs in funds and for staff time should be included as part of the final draft plan for each of the possible actions
2. The costs associated with managing the Sanctuary should be made public.
   3. The Sanctuary must lead by example by reducing waste through the use of recycled goods, alternative energy, and other methods of minimizing waste.
4. Use packaging materials that have the potential of being recycled.
5. Assess ability for SBNMS to perform its job given current funding. What are restraints on increasing budget?

6. The Revised Management Plan should include an itemized list of resources needed to support the fulfillment of the goals of the Sanctuary program and the SBNMS.
7. The revised management plan should reflect the Sanctuary's need for the necessary platforms to carry out their programs, such as: completed Sanctuary offices and meeting space, a larger research vessel to support research at this offshore site, and sufficient personnel to successfully implement Sanctuary programs.
8. The revised management plan should reflect the Sanctuary's need for the necessary platforms to carry out their programs, such as: completed Sanctuary offices and meeting space, a larger research vessel to support research at this offshore site, and sufficient personnel to successfully implement Sanctuary programs.

Working Group Name: Inter-Agency Cooperation

Issues Addressed:

8.A Clarification of Overlapping Agency Responsibilities
8.B Inter-Agency Coordination and Effectiveness

Issue Description:

The Management Plan Review was initiated through public scoping meetings in 1998 and again in 2002. At both series of meetings the public expressed considerable concern about deficient inter-agency relationships and the confusion that creates for the regulated public. Clarification of agency roles in the area of SBNMS will strengthen resource management measures by strengthening agency efficiency and collaboration.

Background and Regional Context:

During scoping, concern was expressed that the legal mandate for SBNMS was not clear, or at least, was not being communicated clearly. Substantive comments were directed at the need to clarify multiple agency roles and responsibilities where jurisdictions overlap within the Sanctuary. This need was most often voiced with regard to the management of fish and fishing but extends as well, for example, to the protection of water quality in the face of such activities as ocean dumping, waste disposal and vessel discharge. By way of illustration, regulation of these latter activities can involve coordination among the Sanctuary, National Marine Fisheries Service, U.S. Army Corps of Engineers, U.S. Environmental Protection Agency and the U.S. Coast Guard.

The National Marine Sanctuaries Act (NMSA) explicitly recognizes that multiple regulatory agencies may share authority over Sanctuary resources. However, one of the primary purposes of the NMSA is to provide Sanctuaries the authority for comprehensive and coordinated conservation and management of the resources within their jurisdictions, and the activities affecting them, in a manner that complements existing regulatory authorities. The stated intent of the Sanctuary Designation Document is that the Sanctuary shall be governed by valid regulations [by whatever agency], which are the most protective of Sanctuary resources and qualities.

Within a related context, numerous comments pertained to the inherent contradiction in purpose that can arise between the Magnuson-Stevens Fishery Conservation and Management Act (MSFMCA) and the National Marine Sanctuaries Act (NMSA). Specifically, a primary purpose of the MSFCMA is to secure the optimum sustainable yield from commercial fisheries i.e., treating fish as an extractive commodity. In contrast, a primary purpose of the NMSA is to protect fish as an important component of natural biological communities i.e., treating fish as intrinsically valued wildlife. Administrative mechanisms to address this disparity are needed to manage conflict and promote effective implementation of these Acts. Such means could include greater institutionalization of inter-agency coordination through consultation, permitting and promulgation of complementary regulations, for example.

Existing Regulations:

Regulations flow from Congress empowering an agency with statutory authority. The following is a partial list of statutes affecting SBNMS:

- The National Marine Sanctuary Act (16 USC 1431 et seq.)
- Magnuson Stevens Fishery Conservation and Management Act (16 USC 1801 et seq.)
- Endangered Species Act (16 USC 1531 et seq.)
- Marine Mammal Protection Act of 1972 (16 USC 1361 et seq.)
- Clean Water Act (33 USC 1251 et seq.)
- River and Harbor Act (33 USC 401 et seq.)
- Ports and Waterways Safety Act (33 USC 1221 et seq.)
- Act to Prevent Pollution from Ships (33 USC 1901 et seq.)
- Outer Continental Shelf Lands Act (43 USC 1131 et seq.)
- Marine Protection, Research and Sanctuaries Act
  (33 USC 1401 et seq., Title 1, Ocean Dumping Act)
- National Environmental Protection Act (42 USC 4371 et seq.)
- Fish and Wildlife Coordination Act (16 USC 661 – 667e)
- The Fish and Wildlife Act of 1956 (16 USC 742a et seq.)
- Coastal Zone Management Act (16 USC 1451 et seq.)
- The Migratory Marine Game-Fish Act (16 USC 1501 et seq.)
- The National Historic Preservation Act (16 USC 470)
- National Contaminated Sediment Assessment and Management Act (33 USC 1271)
- Nonindigenous Aquatic Nuisance Prevention and Control Act (16 USC 4701 et seq.)
- Oil Pollution Act of 1990 (33 USC 2701 et seq.)

Who are the Players?

Government Agencies (Management and Enforcement)

SBNMS
NMFS
NOAA Office of Law Enforcement
New England Fisheries Management Council
Massachusetts Division of Marine Fisheries
Massachusetts Water Resources Authority
Massachusetts Coastal Zone Management
Massachusetts Environmental Police
MassPort
Environmental Protection Agency
United States Coast Guard
Army Corp of Engineers
Cape Cod National Seashore
U.S. Fish and Wildlife
US Navy

Research Universities

University of Massachusetts
University of Rhode Island

Working Group Participants:

SBNMS Staff Team Leader: Kate Van Dine
SAC Member Chair (1)
Agencies (14) as listed above
Legal / Policy Academic (1)
Public Interest (1)

Technical Advisors:
Technical advisors will provide supporting data to the Sanctuary, and may provide presentations on particular topics directly to the working group.

Anticipated Outcomes and Products:

The working group will develop a framework for identifying interfaces and addressing regional inter-agency relationships. This framework would suggest mechanisms for efficient, effective

inter-agency communication and partnerships as well as strategies to encourage enhanced coordination and cooperation when appropriate. Additionally, a summary of existing legal authorities will be drafted.

Proposed Timeline:

A total of five all-day meetings, once a month will occur between August and December 2003,

Relevant Public Scoping Comments

8.A Clarificaiton of Overlapping Agency Responsibilities:

Concerns:

1. The job of the management structure is to follow the NMSA
2. The act states the priority is conservation with use allowed to the extent compatible with that priority
3. If the site is not going to invest in changes of management method then there is no function of the sanctuary that is not redundant.
4. NMSA gives SBNMS power to regulate fisheries
5. SBNMS trying to do something they know nothing about
6. NMSA allows Sanctuary the power to regulate fishing when interfering with SB's primary mission of resource protection therefore SBNMS needs to recognize the contradictions they currently work under and regulate according to the NMSA mandate which is the law / organic statute for the Sanctuary program; regulations must respect that law
7. The National Marine Sanctuary Program represents the only federal program that actively works to conserve ecosystems and biodiversity.
   No one has the freedom to have a vision for a conserved ecosystem like the SBNMS.
8. The public needs to know, from the deeds and practices of the sites managers and trustees,
   Why is there an NMS on SB?
   What role is it unequivocally filling?
   What fundamental contribution can it make?
9. The SBNMS needs to realize its reason for existence unambiguously and repeatedly so to provide a frame of reference for evaluating the sanctuary processes and products
10. Role of SBNMS must be relevant to the context in which it functions
    SBNMS represents a critical site in the life of many of the greater Gulf of Maine resources
    SBNMS like the rest of the region has been consistently altered by human use
    If SBNMS will be the "flagship MPA" in GoM it must lead efforts to understand the impacts of this use
    This requires SBNMS operate as a locus of management experimentation and learning
11. While clarification of role is critical I remain deeply concerned about the Sanctuary's practical commitment to resource protection within its boundaries to date
    Consistent with improving our understanding of GoM ecosystem and human impacts, and our ability to manage these uses is the need to ensure the resources that define the ecological character and significance if this area are sustained.
12. Role of sanctuary should be redefined to accommodate NMSA
13. Can SBNMS carry out mandate due to lack of regulatory structure and enforcement?
14. During the public scoping meetings in September and October of 2002, several commenters suggested that the Sanctuary could not regulate fishing activities within the Sanctuary boundaries. This is contrary to the NMSA and the Sanctuary's stated purpose "to protect, and, where appropriate, restore and enhance natural habitats, populations and ecological processes."
15. The Sanctuary is not legally precluded from implementing regulations that control fishing activities in all or part of the Sanctuary if to do so is necessary to fulfill the Sanctuary's primary mandate under the NMSA "to protect, and, where appropriate, restore and enhance natural habitats, populations and ecological processes."

    The National Oceanographic and Atmospheric Administration responded specifically to this question in its Final Environmental Impact Statement by stating the following:

    "During the process of its consideration of Stellwagen Bank for Sanctuary designation, NOAA/NOS has identified fisheries as a resource of national significance, and is therefore obligated under Title III of the Marine Protection, Research and Sanctuaries Act to ensure adequate mechanism exist to properly manage and protect the long-term viability of this resource within the Sanctuary.

NOAA does not agree that the regulatory language in the proposed Sanctuary Designation Document (Article VI, Section 2) contradicts the intent of the MFCMA [Magnuson Fisheries Conservation and Management Act] or that the MFCMA precludes the regulation of fishing within sanctuaries under Title III of the MPRSA. The intent of the Designation Document language is that the Sanctuary shall be governed by valid regulations that are the most protective of Sanctuary resources and qualities. This is wholly consistent with Title III and does not conflict with the MFCMA." (Final Environmental Impact Statement/Management Plan, Vol. 2, Appendix G, pp. G13-14, 1993.)

16. A variety of state and federal agencies manage numerous protected areas providing an array of management measures, but there are no no-take marine reserves providing comprehensive protection to the marine ecosystem.
    The number of agencies and authorities involved is often confusing, as demonstrated by recent discussions of MPAs and marine reserves in the New England region that have been disjointed and polarizing.
17. There are differences between the MSFCMA and the NMSA, and the results when management actions under one law are not designed to meet the mandate of the other.
    A primary objective of the MSFCMA is to secure the optimum yield from commercial fisheries.
    In contrast, the NMSA's mandate is to protect natural biological communities, and restore and enhance them where necessary.
18. The National Marine Sanctuaries Act explicitly recognizes that multiple regulatory agencies may share authority over Sanctuary resources and establishes as one of the primary purposes of the NMSA: "to provide authority for comprehensive and coordinated conservation and management of [Sanctuaries], and activities affecting them, in a manner which complements existing regulatory authorities." 16 U.S.C. §1431(b)(2).
19. The Sanctuary cannot fulfill its statutory and regulatory responsibilities to protect Sanctuary resources by deferring to or relying solely on any other entity's management activities that affect Sanctuary resources.
20. NMFS has the primary management responsibilities for fisheries and endangered species/marine mammals under the mandates of the Magnuson-Stevens Fishery Conservation and Management Act (MFCMA), Endangered Species Act (ESA), and Marine Mammal Protection Act (MMPA) with cross jurisdiction within SBNMS.
21. Clarify the authority of the SBNMS to restrict fishing activity and commercial shipping within the sanctuary.
    SBNMS should seek NOAA General Counsel legal guidance on whether the SBNMS acting alone, can restrict these activities and under what circumstances.
22. NOAA's policy on how restrictions on fishing activity will be addressed should be made clear in the new plan.
    Historically NEFMC has been considered the appropriate external venue for such actions.
    Restrictions on fishing activity would include all considerations that implicate fishing activities.
23. If the role of the site is not clear then the site is expensive and redundant
24. Is the SBNMS clear in what the program mandate is?
25. The National Marine Sanctuaries Act (NMSA) provides a powerful and compelling set of purposes regarding resource protection, public education, and scientific research that will guide the revision of the Sanctuary's management plan.

Actions / strategies:

1. Regulatory measures must be refined or developed and implemented to ensure SBNMS has to have the authority to carry out its mission
2. Perform a review of fed and state authority over sanctuary waters to assure SBNMS has authority to carry out its mission
3. Clarify Sanctuary mandate and program
4. Clarify the difference between an MPA and SBNMS
5. Provide a comprehensive presentation of overlapping jurisdictions and agency responsibilities
6. Identify conflicts that require clarification
7. Need final clarification of SBNMS in fisheries management (in conjunction with NMFS)
   Conflicting mandates within NOAA between SBNMS and NMFS
8. NEFMC must acknowledge that SBNMS is a sanctuary and a "special area"
9. Must be statutory clarification about sanctuary authority to regulate commercial fishing
   Perform a review of legislative history to clarify "promise" by SBNMS not to regulate fishing

10. The MPR should include a comprehensive review of interagency jurisdiction over the management of activities and resources within the Sanctuary and the role of the Sanctuary in the coordination of these agencies.
11. Avoid redundancy in agency actions
12. The MPR should include a comprehensive review of interagency jurisdiction over the management of activities and resources within the Sanctuary and the role of the Sanctuary in the coordination of these agencies.
13. Discuss how the sanctuary and its MP fits into or complements other regional (GoM) and national ocean management plans and initiatives

8.B Inter Agency Coordination and Effectiveness:

Concerns:

1. Current conflicts between missions and jurisdictions makes effective management difficult if not impossible
2. Value to the sanctuary is to change the status quo management methods
3. Management has not dealt with the fishing issue in its many dimensions.
4. The current way of managing the site is redundant with other agency actions
5. As a management team it is your job to ensure the health of the ecosystem for current and future generations.
6. Statutory authority exists for NEFMC / NMFS to regulate fisheries, maintain existing authorities
   Don't need more regulation coming from SBNMS; This would be a violation of the commitment from the New England congressional delegation at designation.
7. Concerned sanctuary name is a misnomer – name has nothing to do with the sanctuary itself
   Species protection didn't relate to Sanctuary (other agencies i.e. ESA; MMPA etc)
   Seafloor impacted by dragging gear
   Marine zoning approach to management should be considered
   Consider rollover system where some parts closed; some parts open and then shifted
8. Sanctuary talks about ecosystem based management v. single species management
   The authority or ability of sanctuary to actually do this needs to be addressed
9. There is a clear struggle of how to apply NMSA, SBNMS does not know what it's job is so it does nothing that can't be done by another agency
   Mandate is ecological protection
   Original plan deferred to NEFMC in fisheries activities;
   Given current trends and resource issues is that still appropriate?
10. SBNMS must work within the context NMSA not Magnuson, etc.; What is NMSA mandate?
11. Sanctuary is not a sanctuary
    NMSA gives SBNMS power to regulate fisheries
    Sanctuary should coordinate with NEFMC to regulate and define what fishing should be in SBNMS (gear, species, etc)
    Sanctuary should have a vision of how fishing fits into ecosystem based management
    Discussion of fishing regulations should involve fishermen and include socio economic, biological, ecological impacts
12. Clarify Agency Roles: clarify intra and interagency roles (such as within NOAA).
13. How does SBNMS avoid spreading itself too thin into areas already covered by another entity or agency?
14. SBNMS process would function much better if meshed with NEFMC process; Right now process is inefficient and ineffective
15. MPR process provides a chance for thorough review and all regs and to coordinate with other agencies
16. It is time for the Sanctuary to fulfill the mandate of the NMSA and complement the efforts of other agencies by leading a process to establish scientifically based no-take marine reserves in SBNMS, sufficient to protect resources and restore ecosystems.
17. Sanctuary managers can and should take all appropriate steps in cooperation with the NEFMC to regulate fishing activities within the Sanctuary, to ensure that SBNMS resources, both living and non-living, are protected and, where necessary, restored.
18. The Sanctuary cannot fully carry out the purpose of the NMSA when reviewing management plans to "revise the management plan *and regulations* as necessary to fulfill the purposes and policies of this title" unless all activities

within the Sanctuary are assessed for possible regulation, using the full public process afforded and coordinating with other agencies as required. 16 U.S.C. 1431 Sec. 304(e) (emphasis added).

19. Agencies (NMFS-NER / SBNMS)must coordinate activities.
20. In the course of ecosystems based approach to management SBNMS must not create conflicting regulations with NMFS management actions
21. Proactive consultation between our NMFS NEFSC / SBNMS should prevent misunderstandings and allow NOAA to speak with one voice.
22. Fishing, whale watching, vessel operation and handling, and other resource extraction are currently "regulated or administered" by other federal, state or regional agencies.
23. Comprehensive protection of SBNMS requires greater effort and more expertise than resides in NMSP office

Actions / strategies:

1. Cross jurisdictional missions need to work in concert
2 To assure perception of “objective” data then there must be a combination of internal information and visible collaboration.
3. Sanctuary should coordinate with NEFMC to regulate and define what fishing should be in SBNMS (gear, species, etc)
4. Fishing, whale watching, vessel operation and handling, and other resource extraction are currently "regulated or administered" by other federal, state or regional agencies.
   People and vessels, which conduct these types of operations, get their permits from the particular resource agency. If it is necessary to separate out Stellwagen Sanctuary for a "separate" or "additional" permit or license, close cooperation between the Sanctuary and the current issuing agency and the resource user is necessary.
5. The resource user (using fishing as an example) should not have to go to Boston to get one permit (state), Gloucester to get another (federal), then to Scituate to get the Sanctuary permit.
6. Make sure SBNMS has active coordination with NMFS, Mngmnt Council on issues such as herring
7. When trying to regulate groups need to avoid regulatory redundancies
   Does SBNMS know what other agencies have overlapping regs in SBNMS?
8. Parts of the boundaries of the Sanctuary abut state ocean sanctuaries. Sanctuary management should be in close contact with the state to create a smooth regulatory interface.
9. SBNMS must coordinate with regional and international communities
10. The Sanctuary should build on existing relationships with other agencies, managers and stakeholders such as the NEFMC, and actively engage them regarding efforts to best protect SBNMS resources from the effects of fishing.
11. CZM recommends that the SBNMS staff continue to provide input into siting and compliance-related monitoring of permitted activities.
12. Any management regime for the Sanctuary should be in cooperation with the existing regulatory agencies to minimize the burden.
13. The revised management plan must include more effective measures to protect and restore all resources within the Sanctuary, complementing and reinforcing management measures established by other authorities to reflect a comprehensive, precautionary management approach.
14. The Sanctuary should coordinate closely with other efforts and agencies on marine mammal issues, but the revised management plan should reflect the Sanctuary’s primary objective to protect resources and allow only those uses that are compatible with that objective.
15. There also must be a blueprint for continued cooperation with and support from the fishing industry and state and Council fisheries managers who share many of the same concerns as the Sanctuary.
16. Integrate SBNMS MP with NOAA’s Strategic Plan; there should be overarching goals and objectives
17. Fishermen are offering to take Sanctuary personnel out on their boats
18. Enter into a comprehensive program working with NEFMC, NMFS and full range of fisheries interests
19. Partner with state to link state sanctuary with federal sanctuary
20. As many of the species that inhabit SBNMS are seasonal or migratory management decisions should utilize global information.

21. SBNMS must coordinate with regional and international communities
22. NEFSC scientists have conducted studies on fishing gear impacts to benthic habitat within the Closed Areas on Georges Bank. NEFMC will collaborate with SBNMS to address the concern of gear impacts generally.
23. NEFSC will collaborate and exchange information regarding ecosystems-based approaches to fisheries management.
24. The NEFSC conducts a variety of surveys on the regional distribution/abundance of fish/shellfish species and marine mammals that could provide a context for site specific surveys conducted by the SBNMS.
25. Develop partnering opportunities between the SBNMS and NOAA Fisheries' Northeast Regional Office (NER) relating to: habitat conservation, sustainable fisheries, protected species and research.
26. Partner with NMFS to develop benchmark information to determine whether sea floor habitat is deteriorating or recovering.
27. NMFS Partnership can leverage existing resources in such investigations to maximize the research return. Such research may allow progress to be made, for example in providing a more narrow scientifically based definition of essential fish habitat, or to provide a baseline index of habitat health, water quality, etc.
    To proceed from research into management, NOAA will need to develop the scientific basis to respond to the public's questions in these areas.
28. We suggest the Plan identify DMF, and fishermen, as your Sanctuary research partners with an emphasis on conservation engineering for improved habitat protection.
    DMF's Conservation Engineering Program is of high priority, and we have plans for significant expansion.
    With DMF intending to acquire more and better fishing gear-monitoring devices in partnership with the Sanctuary we can tackle common habitat conservation concerns.
29. Continue support of existing regional efforts such as the North Atlantic Right Whale Consortium and the Atlantic Large Whale Take Reduction Team

Additional Scoping Comments:

General Guidance:

1. Precautionary management concerns process and commitment to problem solving rather than dictating an outcome.
2. In face of scientific uncertainty it promotes difficult but open, flexible approach to decision making so long as the long term goal is clear.
3. Three features relevant to the management of SBNMS are:
   Healthy, resilient and productive ecological systems.
   A populace with a close and rewarding relationship with the sea, including a sustainable commercial fishing industry (preferably smaller owner/operators with strong local ties), which has been a part of New England's culture and economy for the past two centuries.
   Research and management endeavors that are responsive, progressive and a model for the rest of the world.
4. Managers should be aggressive at including multiple opinions and insights.
5. At every opportunity SBNMS must look for the most environmentally responsible means and be an example of responsible government (see Cape Cod National Seashore MP)
6. If SBNMS intends to dictate more responsible behavior for marine activities then they need to show a willingness and commitment to do so at home.
7. Either SBNMS should be a "sanctuary" or say it can't do its job and go out of existence
   It is currently contributing nothing to ocean management
8. MPR is exciting time to do thoughtful review of what sanctuary can do better
9. Recognize US Comm. on Ocean Policy report that the oceans health is in jeopardy
10. Do not miss this opportunity to ensure the sanctuary lives up to its name
11. Sanctuary is not a sanctuary and visitors to the visitors center are shocked to learn that
12. Sanctuary staff should err on the side of protecting the resources of the Sanctuary.
13. "State of the Sanctuary" report doesn't describe the actual condition of SBNMS and problems. It is a marketing piece. Also activities from early years are missing
14. Making visible and objective, administrative decisions regarding budget expenditures and bidding for contracts sends a very powerful message about results.
15. Format of public meetings is flawed; Round table process loses something from traditional way of seeking public comment; Can't hear what everyone else has to say
16. Timing of meeting was not good, (Sat.) only reason fishermen could be there was because weather was blowing and couldn't get out to fish
17. Concerned by process – "sum of all fears"
    Concerned that something will become institutionalized as legitimate without data
    Management issues raised will become institutionalized as legit without data to substantiate
18. Concerned about how sanctuary will prioritize issues brought up during scoping
    Clarify and communicate the process
19. What good are scoping meetings? What is accomplished?
20. SBNMS should conduct information discussions with people who are interested in other processes than inshore fishers at other sites
21. SAC doesn't accurately represent all of interests
    How can comm. fishing rep who doesn't fish sanct waters give input?
    Concern for how seats were advertised and selected
    Concern that SAC deceived out of vested interests
22. Readers digest version of public comment does disservice to the democratic public process – this process is an insult
23. Gloucester should be represented on SAC
24. Appreciation for public inclusion of fishermen; Thanks to NMS for doing 5 year review and to commitment to public comments
25. Rules proposed should have scientific backing and sound reasoning – not feel good response
26. MPR should commit to deadlines and make this process a priority

27. Clearly articulate long and short term goals of SBNMS
28. Articulate and publicize process for decision making: Who makes final decision or review? Is public asked if final MP s ok? At what point are draft regulations open to the public
29. Send synopsis of comments to participants
30. Enhance scoping attendance for fishermen through new means of outreach
31. SBNMS must be more inclusive through advisory committee / working groups process
    Must be representation from all types of fisheries / gear types to help solve problems
32. Review SAC membership – 2 seats for conservation is enough
33. Public comments and decisions should be accessible to the general public in easily understandable and accessible format.
34. Establish a clear protocol with full public review for issuance of special permits to ensure Sanctuary resources are not put at risk.
35. Oral Scoping Comments Should be Less than Two Minutes and Require Sign Up Sheets:
36. The round table solicitation of comments did not lead to productive remarks during the scoping process.
    While facilitators attempted to prevent "discussions" between participants, opposing views led to comments inconsistent with those needed to develop a management plan.
37. For future scoping meetings, individuals should be required to sign in if they would like to submit oral comments of less than two minutes to the SBNMS staff.
    These comments would be recorded in a fashion similar to the one utilized during the 2002 scoping sessions.
38. SBNMS should go about accomplishing new objective (habitat / biodiversity protection)by:
    1. gather pre existing info
    2. establish scientific program within SBNMS
    3. ascertain primary impacts on habitats and biodiversity
    4. everyone should participate in achieving new objectives
39. This is the first time we will have had the opportunity to create a vision for the Sanctuary as the current management regulations were handed down during congressional designation.
40. Gloucester seeks a balanced MP recognizing multiple uses of SB
41. According to the law the new management plan was due in 1998. There should have been a plan in 1998 and a revision in 2003. According to SBNMS website the new plan will be out in 2004 a year later than the second plan should be out. In most institutions that would be grounds for removing the management team!
42. Issues in management plan update are good; but no actions. Why no actions made on list that is 3-4 years old?
    We should take action on identified issues faster (98-99)
43. Support regular review of MP; Such reviews should be comprehensive ; Such reviews should include revisions to regulations as necessary to ensure that each Sanctuary provides the comprehensive and coordinated protection required under the NMSA.
44. Any revisions to the management plan and accompanying regulations should be accomplished through processes (such as action plans) with specific milestones and timetables so resource protection is not delayed by indefinite implementation outside of the management plan review process.
45. New management plan must be specific and include performance measures to ensure the Sanctuary is accountable and addressing specific problems.
46. Multiple users of SBNMS are based in Gloucester (Commercial and recreational fishing; whale watching); these groups have considerable knowledge about the resources of SBNMS
    They should be fully included in working groups on the MPR
47. To fulfill NEPA requirements and strengthen decisions relative to goals and objectives
48. An impact analysis of the major issues is required to fulfill NEPA and support SBNMS and SAC decision making
49. Any revisions to the management plan and accompanying regulations should be accomplished through processes (such as action plans) with specific milestones and timetables so resource protection is not delayed by indefinite implementation outside of the management plan review process.
50. Some rules should be consistent across all sanctuaries

51. Tuna Assoc appreciates existence of SBNMS to prevent ocean mining, deterioration of water quality, and to promote research on useful and realistic marine issues.
52. Original creation justified on importance of preventing sand and gravel removal.
53. Things are working the way they are; don't need additional regs
54. Everything should stay the same; maintain no mining restriction
55. North Shore Community Tuna Assoc statement is that ; Members have historically fished in sanctuary for generations; There should be no changes or limitations to tuna fishing activitie
56. If sanctuary could talk about overfishing, pollution that might give the public something to relate to
57. DMF looks forward to working with you and your staff on action plans for the Sanctuary.

Opposing points of view expressed at the public hearings will have to be debated and reconciled if possible.
The process should witness the clash of agendas of people and organizations wanting to seize this Sanctuary initiative as the vehicle to maximize habitat protection in the interest of precautionary habitat management, and even precautionary fisheries management.
We hope it doesn't come down to a win-lose situation for those people and organizations.
There must be win-win situations.

General Scoping Questions:

What makes the sanctuary different
What is cutting edge about Stellwagen?
What is the desired future state of SBNMS?
What are measurable outcomes for evaluating progress towards desired state?
Should SBNMS be more managed more like a National Forest, National Monument or a National Park?
What is the National Marine Sanctuary Program and what is the Stellwagen Bank NMS Mandate?
What is the Sanctuary part of the program?
What is the SBNMS conserving / managing?
What is the purpose of the NMSP when a sanctuary is not remotely a sanctuary, nor managed for maintaining healthy ecosystem function?
Is there clear statutory language to perform this mandate?
Is there a national commitment to ecosystem based management strategies?
Votes will drive review of environmental laws rather than the best approach to problem solving.
Can SBNMS function in a precautionary way?
How can the sanctuary contribute to changes in the status quo behavior of ocean uses and attitudes market incentives for sustainable catch; educating on stewardship concepts; etc
What does a successful Sanctuary look like?
Why can't this area become a part of the National Park Service?
Issues in management plan update are good; but no actions. Why no actions made on list that is 3-4 years old?
SBNMS does not do anything so why does it exist?